

## **ASM GSA Course Description**

# **Desktop Application & Web development Course Descriptions and Prerequisites**

### **Microsoft Access 2003 Level 1**

**Overview:** Most organizations maintain and manage large amounts of information. One of the most efficient and powerful information management, computer based applications, is the relational database. Information can be stored, linked, and managed using a single relational database application and its associated tools. In this course, you will be introduced to the concept of the relational database and the Microsoft® Office Access 2003 relational database

application and its information management tools.

**Prerequisites:** An Introduction to Windows course or equivalent knowledge.

**Description:** Course length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Examine the Microsoft® Office Access 2003 database application
- Manage the data in a database
- Examine existing table relationships
- Query the database
- Design simple forms
- Create and modify Access reports

## **Microsoft Access 2003 Level 2**

**Overview:** As you begin this course, you should have the basic skills you need to work with a Microsoft® Office Access 2003 databases. This includes working with Access tables, relationships, queries, forms, and reports. But thus far you have been focusing on essential database user skills only. In this course you will consider how to design and create a new Access database, how to customize database components, and how to share Access data with other applications.

**Prerequisites** To ensure the successful completion of Access 2003 Level 2, we recommend completion of the Access 2003 Level 1, or equivalent knowledge of basic familiarity with Access tables, relationships, queries, forms, and reports.

**Description:** Course length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Create a new database with related tables
- Control data entry by modifying the design of a table to streamline data entry and maintain data integrity
- Find and retrieve desired data by using filters and joins between tables and within a single table

- Create flexible queries to display specified records; allow for user-determined query criteria; and add, update, and delete data with queries
- Enhance the appearance, data entry, and data access capabilities of your forms
- Customize reports to better organize the displayed information and produce specific print layouts such as mailing labels
- Use Access data in other applications, including Microsoft Word and Excel

## **Microsoft Access 2003 Level 3**

**Overview:** Your training in and use of Microsoft® Office Access 2003 has provided you with a solid foundation in the basic and intermediate skills for working in Microsoft® Office Access 2003. You're now ready to extend your knowledge into some of the more specialized and advanced capabilities.

**Prerequisites:** Access 2003 Level 1 and Access 2003 Level 2, or equivalent knowledge.

**Description:** Course length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Restructure an existing set of data to improve the design of a database
- Use a variety of techniques to summarize and present data with queries
- Create and revise basic Access macros
- Create macros that improve data entry efficiency and integrity
- Improve the effectiveness of data entry in forms
- Improve the effectiveness of data displayed in reports
- Maintain an Access database by using various utility tools

## **Microsoft Access 2002 (XP): Level 1**

**Prerequisites:** To ensure your success, we recommend you first take the

following Element K course or have equivalent knowledge of Windows 2000: Introduction.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Define the purpose of and terminology associated with a relational database and Access objects.
- Follow the steps required to properly design a database.
- Create tables to hold data and then establish table relationships.
- Modify the design of and work with data in tables.
- Create, modify the design of, and work with select queries.
- Create and modify forms to work with your data.
- Create and modify reports to select, organize, and print data.

## **Microsoft Access 2002 (XP): Level 2**

**Prerequisites:** Students enrolling in this course should have a basic level of understanding of the Access 2000 interface, and should have experience designing tables, simple queries, forms, and reports. To ensure your success, we recommend you first take the following Element K courses or have equivalent knowledge of Windows 2000: Introduction and Microsoft Access 2002 (XP): Level 1

**Description:** Course length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Share data with other applications and enforce referential integrity.

- Modify the design of a table to streamline data entry and maintain data integrity.
- Use a filter to show records that match criteria and generate different query results by creating different types of joins between tables.
- Create select queries that display special records and design other types of queries, including parameter and action queries.
- Create forms and change their designs to enhance the appearance and usability of a form, and to make your form more professional.
- Create reports and change their designs to better organize and summarize information, and to improve the appearance by enhancing data layout and working with report pagination.
- Create, modify, and work with data access pages.

## **Microsoft Access 2002 (XP): Level 3**

**Prerequisites:** To ensure your success, we recommend you first take the following Element K courses or have equivalent knowledge of Access 2002 (XP): Level 1.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Put existing data into correctly designed tables and compact your database.
- Use a variety of techniques to summarize data.
- Create and revise basic Access macros.
- Create macros that require data entry in certain fields and automate data entry in others.
- Use advanced features to enhance forms.

- Use advanced features to enhance reports and distribute a report to non-Access users.
- Use Office Links to use Access data in other Office programs.

## **Adobe Acrobat 5.0: Introduction**

**Overview:** In *Acrobat 5.0: Introduction (Windows)*, you will explore the Acrobat 5.0 work environment, and practice creating and manipulating Portable Document Format (PDF) files. Some of the topics you will cover include: how to create a PDF file, how to modify a PDF file by adding navigation to it, how to add sound and movie clips to a PDF file, how to annotate (add additional comments to) a PDF file, how to create PDF forms, how to create an index of PDF documents, how to add security to PDF documents, and how to distribute PDFs.

**Prerequisites:** Students should have basic knowledge of computers and experience in navigating around the Microsoft Windows work environment. No previous knowledge of Acrobat is required.

**Description:** Course length- 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Create a PDF file from various media, including electronic files, Web pages, and scanned images.
- Modify PDF files by adding hyperlinks, bookmarks, and movie and sound clips to them.
- Add graphic and text annotations to a PDF file.
- Create a Web Ready PDF form and validate data in the form.
- Index a collection of PDF files.
- Limit accessibility to PDF files by adding password security and digital signatures to them.

- Optimize and distribute PDF files.

## **ColdFusion 5: Level 1**

**Overview:** *ColdFusion 5.0 Professional Level 1* introduces you to ColdFusion Markup Language. This course will explain how ColdFusion applications are created and processed. You'll learn how to customize and use ColdFusion Studio to create your applications. You'll also learn how to access and display database content in your Web pages. Students will discover the power of ColdFusion-driven Web applications by examining their standard components. They will also customize the ColdFusion Studio work environment to fit their own personal needs. Students will work with ColdFusion functions, variables, queries, and templates.

**Prerequisites:** To ensure your success, we recommend you first take the following Element K courses, or have equivalent knowledge: *HTML 4.01: Web Authoring, Level 1* & *HTML 4.01: Web Authoring, Level 2*

**Description:** Course length- 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Name and describe the different components involved in developing and running a ColdFusion-driven Web application.
- Customize and configure ColdFusion Studio's development environment.
- Create and display the value of ColdFusion variables.
- Use ColdFusion's functions to manipulate and format data.
- Query and display database content.
- Include the content of another template into the one being processed.

## ColdFusion 5: Level 2

**Overview:** *ColdFusion 5.0 Professional: Level 2* introduces you to ColdFusion forms, URL parameters and explains how to validate request data. This course also introduces Web based drill-down interfaces and the implementation of them. In addition, you'll learn how to build dynamic forms and SQL statements. It assumes a knowledge of basic CFML, use of ColdFusion Studio, and how to access and display database content in your Web pages. Students will examine an existing ColdFusion application, and then create one like it by learning and implementing an assortment of skills, both new and old. They will create a drill-down interface, work with action pages and forms, and integrate new CFML tags into their applications.

**Prerequisites:** To ensure your success, we recommend you first take the following Element K course or have equivalent knowledge: *ColdFusion 5.0 Professional: Level 1*

**Description:** Course length- 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Examine a completed ColdFusion Application that implements all lesson objectives.
- Understand URL parameters, and create a data drill-down interface.
- Gather information using an HTML form, submit the gathered information, and work with action page variables.
- Implement client-side validation via the cfform tag, and dynamically populate form fields.
- Utilize CFML conditional tags, conditional operators, and the cfloop tag.
- Construct dynamic SQL statements and implement server-side validation.

## ColdFusion 5: Level 3

*ColdFusion 5: Level 3* describes how to insert, update, and delete data in a database through your Web application. This course will show you how to create and process conditional forms. You'll also learn the importance of state management, and discuss both client- and server-side state management techniques. Finally, ColdFusion's Web application framework will be presented. Students will examine an existing ColdFusion application, and then create one like it by learning and implementing an assortment of skills, both new and old. They will insert, update, and delete data in databases, work with conditional forms, employ state management techniques, and learn to restrict access to their application.

**Prerequisites:** To ensure your success, we recommend you first take the following Element K courses, or have equivalent knowledge: *ColdFusion 5: Level 1 & ColdFusion 5: Level 2*

**Description:** Course length- 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Discuss how the concepts covered in this course can be applied to a Web application.
- Create the components that allow you to insert data into a database.
- Create the components that allow you to update and delete data in a database.
- Create and process conditional forms.
- Explain the importance of state management and describe client-side state management techniques.
- Implement server-side management techniques and restrict access to your application.

## ColdFusion Professional For Developers

**Overview:** Students will learn how to create dynamic and database-driven Web sites with ColdFusion. Students will learn how to use the ColdFusion Markup Language to create Web pages that interact with users and with server-side resources, particularly databases.

**Prerequisites:** Students should take the following courses: *HTML 4.0: Level 1, HTML 4.0: Level 2, SQL Fundamentals (SQL Advanced is also recommended), Fundamentals of Programming*

**Description:** Course length- 2 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Describe how ColdFusion works and list advantages of developing with ColdFusion.
- Create and manipulate variables and output their values, and improve coding efficiency by including header and footer files within a template.
- Choose the appropriate database connectivity method for a situation, create an ODBC data source name using the ColdFusion Administrator, query a database and display the results in a Web page, and enable and use ColdFusion's debugging features.
- Read and write data in HTML form fields, use conditional expressions, cache queries to improve performance, and prevent access to action pages.
- Create a keyword search application.
- Output query results in a dynamic table, enable data drill-down features, and output images dynamically.
- Create a paged-results search application.
- Create pages that enable users to update, add, and delete records from the database.

- Validate users' input into forms, using multiple techniques, then re-populate forms after submission.
- Use the ColdFusion Application Framework to enable persistent variables, application-wide settings, and basic security.
- Gather and implement users' preferences and log users in automatically to create personalized Web sites.

## **ColdFusion: Creating Database-Driven Web Sites Level 1**

**Overview:** Students will learn the benefits of using Cold Fusion to create dynamic, data driven Web sites.

**Prerequisites:** Proficiency with HTML, some familiarity with databases and SQL.

**Description:** Course length- 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Use Home Site to create and edit ColdFusion applications.
- Design and create a relational database
- Link a database to the ColdFusion Server using the ColdFusion Administrator.
- Create simple ColdFusion application using CFML.
- Create and include ColdFusion templates.
- Create CFQUERY blocks and SQL statements that query a database.
- Debug ColdFusion applications.
- Create a ColdFusion application that queries a database based on user input.

- Dynamically populate form fields.
- Use conditional logic to manipulate application flow.

## **ColdFusion: Creating Database-Driven Web Sites Level 2**

**Overview:** This course is designed for the non-programmer. Individuals with programming or scripting experience probably will not need to cover some of the information in this book to get started with ColdFusion development. Students taking this course should be experienced with HTML, Internet concepts, SQL fundamentals, and database fundamentals. This course introduces students to the syntax, functions, tags, and possible development solutions they're likely to encounter as they begin to develop ColdFusion applications.

### **Prerequisites:**

This course is designed for the experienced computer user who has an understanding of Internet functionality and fairly extensive experience with HTML. The target student should also understand database and SQL basics. We strongly recommend that all students considering this course should first take *ColdFusion: Creating Database-driven Web Sites, Level 1*. Many vital concepts are omitted from this book because they were covered in Level 1 of this course series. A student who is not experienced with HTML, SQL basics, database fundamentals, and ColdFusion fundamentals, should take the following Ziff-Davis Education courses before proceeding with this course: HTML 4.0 Level 1, HTML 4.0 Level 2, SQL Fundamentals, Introduction to MS Access, ColdFusion: Creating Database-driven Web Sites, Level 1

**Description:** Course length- 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Create dynamic tables to output query results, apply date functions to create a date stamp, and implement a drill-down application.

- Create an application that updates existing database records and records the date and time of modifications.
- Create an application that inserts new records and another that deletes existing records.
- Enable form field validation with a variety of methods, and re-populate a form with submitted data.
- Create a keyword search application that can handle a variety of user criteria.

## **ColdFusion: Creating Database-Driven Web Sites Level 3**

**Overview:** This course is designed for the non-programmer who wants to learn Web application development with ColdFusion. Individuals with programming or scripting experience probably will not need to cover some of the information in this book to get started with ColdFusion development. Students taking this course should be experienced with HTML, Internet concepts, SQL fundamentals, and database fundamentals. This course introduces students to the syntax, functions, tags, and possible development solutions they're likely to encounter as they begin to develop ColdFusion applications.

**Prerequisites:** This course is designed for the experienced computer user who has an understanding of Internet functionality and fairly extensive experience with HTML. The target student should also understand database and SQL basics. We strongly recommend that all students considering this course should first take *ColdFusion: Creating Database-driven Web Sites, Level 1* and *Level 2*. Many vital concepts are omitted from this book because they were covered in Level 1 and Level 2 of this course series.

Any student who is not experienced with HTML, SQL basics, database fundamentals, and ColdFusion fundamentals, should take the following Element K courses before proceeding with this course: HTML 4.0 Level 1, HTML 4.0 Level 2, SQL Fundamentals, Introduction to MS Access ColdFusion: Creating Database-driven Web Sites, Level 1 & ColdFusion: Creating Database-driven

## Web Sites, Level 2

**Description:** Course length- 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Understand and implement the ColdFusion application framework.
- Set and access global variables.
- Create a login page that authenticates users and handles common errors.
- Manage clients with cookies.
- Collect user preferences to display customized content.
- Create a previous/next search application and cached queries.
- Create conditional statements with CFSWITCH

## Dreamweaver MX Level 1: Introduction

**Overview:** Dreamweaver MX: Level 1 is a hands-on instruction book that will introduce you to the basics of the Macromedia Dreamweaver MX Web development application. This course is designed primarily for new or prospective Web designers who want to use Macromedia Dreamweaver to create Web sites.

**Prerequisites:** To ensure your success, you must have a basic understanding of your computer's operating system. For example, you should know how to launch an application, create and save files, and copy files from CDs and other media.

**Description:** Course length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Explain basic concepts about the Internet and the World Wide Web, identify the basic issues concerning proper site design, and navigate in the Dreamweaver work environment.
- Define a site in Dreamweaver to organize and maintain the Web pages; and create a basic Web page by typing text and applying character and paragraph formatting.
- Use Site Panel to create and organize files and folders.
- Insert images, set image properties, create and format tables.
- Add links within a site, create anchors, and specify external links, as well as use images as links, and create image maps.
- Build a frame-based set of pages.
- Upload a site to a remote Web server.

## **Dreamweaver MX Level 2**

**Overview:** You will work with advanced Web site creation features available in Dreamweaver, including libraries and behaviors. In addition, you will use many of the new features available within the HTML 4 standard including style sheets and layers.

**Prerequisites:** Dreamweaver MX Level 1 or equivalent knowledge

**Description:** Course length: 1 day. . Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Create dynamic user-interface elements, including simple rollovers and complex navigation bars.
- Use libraries to manage repeating site elements.

- Define keyword, description, and other meta tags in order to make your site visible to automatic search engine spiders.
- Create CSS styles to streamline text formatting within a page, and create external style sheets to allow formatting information to be used throughout a site.
- Create and manage layers, as well as combine layers with behaviors to provide additional visual feedback for a viewer navigating a site.
- Use the History panel to simplify repetitive tasks both within a single document and with other documents in a site.
- Target page content to specific browsers and versions.
- Add a form to your web page.

## **Dreamweaver 4.0: Introduction**

**Overview:** Course length 1 day. Dreamweaver 4.0 Introduction is a hands-on instruction book that will introduce you to the basics of the Macromedia Dreamweaver 4.0 Web development application.

**Prerequisites:** To ensure your success, you must have a basic understanding of your computer's operating system. For example, you should know how to launch an application, create and save files, and copy files from CDs and other media.

**Description:** Course length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Explain basic concepts about the Internet and the World Wide Web, and how to publish a site
- Navigate in the Dreamweaver work environment
- Create a basic Web page by typing text and importing graphics

- Design a site from scratch, beginning with developing a site map, through final upload of the site to a Web server
- Import text into Dreamweaver pages using several methods
- Perform character and paragraph formatting on text, and define and apply HTML styles to speed up repetitive formatting
- Add links within a site, create anchors, and specify external links
- Create and format tables to assist in page design
- Use images as links and create image maps
- Build a frame-based site to assist the viewer in navigation
- Upload a site to a remote Web server.

## **Dreamweaver 4.0: Advanced**

**Course Description:** Course length- 1 day. Dreamweaver 4.0 Advanced is a hands-on instruction book that will introduce you to advanced concepts of the Dreamweaver 4.0 Web development application. In this course, you will expand on the knowledge you gained in the Dreamweaver 4.0 Introduction course. You will work with advanced Web site creation features available in Dreamweaver, including libraries and behaviors. In addition, you will utilize many of the new features available within the HTML 4 standard including style sheets and layers.

**Prerequisites:** To ensure your success, we recommend you first take the following Element K course or have equivalent knowledge: Dreamweaver 4.0 Introduction

**Description:** Course length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Create dynamic user-interface elements, including simple rollovers and complex navigation bars.

- Work with libraries to manage repeating site elements.
- Define keyword, description, and other Meta tags in order to make your site visible to automatic search engine spiders.
- Create CSS styles to streamline text formatting within a page, and create external style sheets to allow formatting information to be used throughout a site.
- Create layers using a number of techniques, and manage the size, position, stacking order, and visibility of layers.
- Combine layers with behaviors to provide additional visual feedback for a viewer navigating a site.
- Work with the History palette to simplify repetitive tasks both within a single document and with other documents in a site.
- Target page content to specific browsers and versions.
- Learn about several different features included with Dreamweaver 4.0 to assist you in working with code.

## **Microsoft Excel 2003 Level 1**

**Overview:** You have basic computer skills such as using a mouse, navigating through windows, and surfing the Internet. You have also used paper-based systems to store data that you run calculations on. You now want to migrate that data to an electronic format. In this course, you will use Microsoft® Office Excel 2003 to manage, edit, and print data.

**Prerequisites:** Windows XP Introduction or equivalent knowledge.

**Description:** Course Length: 1 day. . Lesson objectives help students become

comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Create a basic worksheet
- Modify a worksheet
- Perform calculations
- Format a worksheet
- Develop a workbook
- Print the contents of a workbook
- Customize the layout of the Excel window

## **Microsoft Excel 2003 Level 2**

**Overview:** In Microsoft® Office Excel 2003: Level 1, you created, edited, formatted, and printed basic spreadsheets. You now have a need to streamline repetitive tasks and display spreadsheet data in more visually effective ways. In this course, you will use Microsoft® Excel 2003 to streamline and enhance your spreadsheets with templates, charts, graphics, and formulas.

**Prerequisites:** To ensure your success, we recommend that you have experience with creating, editing, formatting, saving, and printing basic spreadsheets in Microsoft® Excel 2003. Students can obtain this level of skill by taking the following Systematix course: Microsoft Excel 2003: Level 1  
In addition, Web browsing experience is strongly recommended.

**Description:** Course length: 1 day. . Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Create and apply templates
- Create and modify charts
- Work with graphic objects
- Calculate with advanced formulas
- Sort and filter data
- Use Excel with the Web

## **Microsoft Excel 2003 Level 3**

**Overview:** You have used Microsoft® Office Excel 2003 to perform tasks such as running calculations on data and sorting and filtering numeric data. You would now like to automate some common tasks, apply advanced analysis techniques to more complex data sets, collaborate on worksheets with others, and share Excel data with other applications. In this course, you will do all of these things.

**Prerequisites:** To ensure your success, we recommend you first take the following Systematix courses or have equivalent knowledge: Excel 2003 Level 1 and Excel 2003 Level 2

**Description:** Course Length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Customize workbooks
- Collaborate with others using workbooks
- Audit worksheets
- Analyze data
- Work with multiple workbooks
- Import and export data
- Structure workbooks with XMLb

## **Microsoft Excel 2002 (XP): Level 1**

**Overview:** Students will create, edit, format and print basic worksheets and charts in Excel.

**Prerequisites:** Windows 2000: Introduction

**Description:** Course length: 1 day. Lesson objectives help students become

comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Create a basic worksheet by entering text and values.
- Work with cells and cell data by using a variety of moving and copying techniques.
- Perform calculations on data by using functions and formulas.
- Change the appearance of worksheet data by using a variety of formatting techniques.
- Use a variety of techniques to manipulate multiple worksheets in a workbook.
- Create and modify a chart by using various charting techniques.
- Apply numerous page display settings to prepare a worksheet for printing.

## **Microsoft Excel 2002 (XP): Level 2**

**Overview:** Students will create templates, sort and filter data, and import and export data, analyze data, and collaborate on the Web.

**Prerequisites:** Excel 2002 (XP): Level 1

**Description:** Course length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Use Excel and user-defined templates to create templates and workbooks.
- Use a variety of techniques to sort and filter data.
- Reuse and share data by importing and exporting.
- Use various functions and auditing features to create advanced formulas and audit worksheets.

- Use PivotTable reports, PivotChart reports, and other analysis tools to analyze data.
- Use Web features and comments to collaborate with others.

## **Microsoft Excel 2002 (XP): Level 3**

**Overview:** Students will customize their workbooks, work with multiple data sources, collaborate with other users, and enhance their spreadsheets using charts and graphic objects.

**Prerequisites:** Windows 2000: Introduction, Excel 2002 (XP): Level 1, and Excel 2002 (XP): Level 2.

**Description:** Course length: 1 day Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Apply conditional formatting, add data validation criteria, customize menus and toolbars, create, edit, and run macros. The student will also view data using the outline.
- Create a workspace, consolidate data, and view the consolidated data and link cells.
- Will protect their worksheet, protect their workbook, add and remove file passwords, share their workbooks, set revision tracking, merge workbooks, and track changes.
- Chart non-adjacent data, modify embedded charts, and modify chart items, and add a trend line to their chart.
- Create; change the order of, group, move and copy, and format graphic objects.
- And insert and modify clipart.

## **Macromedia Flash 5.0: Introduction**

**Overview:** In this course, you will gain experience with Flash tools and methods for working in Flash. You will build on this knowledge by using Flash to create animations that you can publish on the Web or as stand-alone files.

Prerequisites: Basic knowledge of the Windows operating system.

## **Description:**

- View a Flash movie and modify the appearance of the Stage.
- Draw, paint, and create custom colors and line styles using Flash tools.
- Manipulate objects, experiment with shape interaction, and import artwork.
- Build layers and use them to create effects.
- Add text, and manipulate its behavior and appearance.
- Create frame-by-frame, shape tweened, and motion tweened animation.
- Publish a Flash movie.

## **Macromedia Flash 5.0: Advanced**

### **Overview**

In this course, you will use Flash to create dynamic applications that range from e-commerce shopping carts to online forms.

**Prerequisites:** Any of the following courses, or equivalent knowledge:  
Windows 98: Introduction, HTML: Level 1, Flash 5: Introduction.

### **Description**

- Create animated sequences using frame-by-frame and tweened animation, and implement the three types of symbols and instances as both a development shortcut and a method for optimizing file size.
- Use Action Script to create basic interactivity, such as image rollovers, go to frame actions,

get URL actions, and drag movie clip.

- Add sound to Flash movies.
- Apply advanced Action Script techniques to create interactive forms, evaluate the position of an object, and dynamically set properties of an object.
- Use Action Script to dynamically set the properties of a movie clip instance.
- Use the testing environment to optimize Flash movies, and publish and export Flash movies.

## **Macromedia Flash 4.0: Introduction**

**Overview:** Students will learn to use Flash to create animations that can be published on the Web or as stand-alone files.

**Prerequisites:** Basic knowledge of the Windows operating system.

**Description:** Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Navigate within the Flash environment to build your projects efficiently.
- Use Flash's drawing tools to create simple and complex objects.
- Manipulate objects on the stage, including selecting, moving, copying, deleting, and transforming them.
- Utilize object interaction on a single layer to combine and segment objects.

- Import artwork from other programs to use in a Flash project.
- Create and format text.
- Perform frame-by-frame and tweened animations.
- Publish your projects for use on the Web.

## **Macromedia Flash 4.0: Advanced**

**Overview:** Flash 4: Advanced is a hands-on instruction book that teaches students to use Macromedia Flash in order to create and publish Flash movies and interactive Web applications.

**Prerequisites:** Any of the following courses, or equivalent knowledge: Windows 98: Introduction, HTML: Level 1, and Flash 4: Introduction.

**Description:** Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Create animated sequences using frame-by-frame animation and tweened animation.
- Implement the three types of symbols and instances as a development shortcut and as a method for optimizing file size.
- Use Action Script to create basic interactivity, such as image rollovers, go to frame actions, get URL actions, and drag movie clip.
- Add sound to Flash movies.
- Apply advanced Action Script techniques to create interactive forms, evaluate the position of an object, and dynamically set the properties of an object.
- **Use the testing environment to optimize Flash movies.**

- **Publish and export Flash movies.**

## **Microsoft FrontPage 2003 Level 1**

**Overview:** As you begin this course, you should have the skills you need to work with Microsoft® Office System applications, especially Microsoft® Word. This includes the ability to create and edit documents that contain text, tables, and images. Now you're ready to use a graphical application to create Web sites and Web pages. In this course, you will use Microsoft® FrontPage® 2003 to design, develop, and deploy Web sites that can be viewed on any Web-enabled computer around the world.

**Prerequisites:** To ensure the successful completion of Microsoft FrontPage 2003: Level 1 , we recommend prior completion of the following Systematix courses (or equivalent knowledge): Word 2003: Level 1, Word 2003: Level 2, Windows XP: Introduction. In addition, it may be helpful if a student has completed HTML 4.01: Web Authoring, Level 1 or has equivalent knowledge from another source.

**Description:** Course Length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Create a Web site that includes new and existing Web pages.
- Add images to Web pages.
- Add links to Web pages.
- Add and format tables.
- Format a Web page.
- Design layouts for your Web pages.
- Use Navigation view to structure a Web site.
- Publish a FrontPage web.

## **Microsoft FrontPage 2003 Level 2**

**Overview:** You have created Web pages with text, graphics, and tables. However, you need to add more complex features, dynamic components, and to enable two-way interaction with your Web site's visitors. In this course, you will use FrontPage® 2003's graphical and convenient tools to add these features to your Web site.

**Prerequisites:** Students taking this course should be familiar with using the Internet. Furthermore, students should have taken the FrontPage® 2003: Level 1 course from Systematix or have equivalent knowledge. Recommended, though not required, is the Access 2003: Level 1 course.

**Description:** Course length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Use frames to display several pages of Web content within a single browser window.
- Add user navigation components to your site, including search, image maps, and a table of contents.
- Create Web forms and save collected data to a file and a database.
- Add dynamic content to Web pages.
- Manage workgroup-based development of FrontPage webs.
- Maintain a site with FrontPage tools.

## **Microsoft FrontPage 2002 (XP): Level 1**

**Overview:** This course is a hands-on instruction book that will introduce students to the basics of creating, editing, and publishing pages that include text, tables, and pictures to an intranet or the World Wide Web and is for those pursuing core-level Microsoft Office User Specialist (MOUS) certification in FrontPage 2002 (XP).

**Prerequisites:** Students enrolling in this course should understand the Windows

environment; word processing, and how to use a Web browser. Windows 2000: Introduction, Microsoft Word 2002 (XP): Level 1, Microsoft Word 2002 (XP): Level 2, and Microsoft Internet Explorer 5.0: Introduction.

**Recommended but not required:** HTML 4.01: Web Authoring Level 1. It is also recommended that students have experience surfing the World Wide Web.

**Description:** Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Identify site-planning considerations, create a new web, a home page, and add and format text on the home page.
- Add tables to a page and modify them.
- Insert a variety of hyperlinks and navigation elements to connect pages.
- Add, edit, and link pictures, as well as apply, adjust, and save a modified theme.
- Use FrontPage tools to organize web content, to check page and web consistency, and to publish a web to the Personal Web Manager.

## **Microsoft FrontPage 2002 (XP): Level 2**

**Overview:** This course is a hands-on instruction book that will introduce students to web-enhancing aspects of creating, editing, and managing pages in FrontPage 2002 (XP) and for those pursuing expert-level Microsoft Office User Specialist (MOUS) certification in FrontPage 2002 (XP).

**Prerequisites:** Students enrolling in this course should understand the Windows environment; word processing, and how to use a Web browser. Windows 2000: Introduction, Microsoft Word 2002 (XP): Level 1, Microsoft Word 2002 (XP): Level 2, Microsoft Internet Explorer 5.0: Introduction, and FrontPage 2002 (XP): Level 1.

Recommended but not required: HTML 4.0 Programming: Level 1 and Access 2002 (XP):

Level. It is also recommended students have experience surfing the World Wide Web.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Create a graphical introductory page for a web.
- Use a variety of methods to display content on a page.
- Acquire data using a form and display the data on a page.
- Make a web more useful by adding elements and components that will make it easier for co-workers and visitors to locate information.
- Manage and monitor web content.

## **HTML 4.01: Web Authoring - Level 1**

**Overview:** Students will learn about how to create Web documents using HTML 4.01.

**Prerequisites:** A student who is not familiar with computers or the Internet will benefit by taking one or more of the following courses before proceeding with this course: Introduction to Personal Computers Using Windows 98 or Mac O/S 9.0: Introduction, Netscape Communicator 4.7: Introduction or Internet Explorer 5.0: Introduction

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Understand what HTML is, how it is used, and how it came to be.
- Use a text editor to set up both global and content structures of an HTML document.
- Create links to locations within a site and out to other sites on the Internet.

- Efficiently format Web page content by using both non-deprecated HTML tags and Cascading Style Sheets.
- Incorporate graphics into Web pages as embedded images, links, and backgrounds.
- Generate unordered, ordered, and nested lists in HTML documents.
- Build and format tables for presenting data.

## **HTML 4.01: Web Authoring - Level 2**

**Overview:** This course was developed primarily for Internet Explorer 5.0 for Windows and Netscape Navigator 4.7 for Windows. Other versions of these browsers might lead to different results than indicated in the task observations. The course was also tested using Internet Explorer 5 and Netscape Navigator 4.6 for the Macintosh. Where necessary, support issues for certain browsers are mentioned in task steps or in notes along the margins of relevant tasks.

This course is meant to provide you with the tools to create your own HTML documents. The sample files are not necessarily intended as design suggestions or principles. The course files are meant to provide the student with solutions that are easy to grasp, and to a certain extent, represent realistic applications. The concepts and tasks in this book are designed for sequential completion. Each topic builds on previous experience, so it makes sense to complete the tasks in the order they appear. You might want to skip certain tasks if you are already familiar with the material, but in some cases, this might lead to different results than you'll see in the screenshots throughout the book. Some of the files for this course have "solution files" that you can use to check your work if you're not sure how to proceed in a task. These files begin with x, followed by the name of the file they're associated with.

**Prerequisites:** This course is designed for the student who is an experienced computer user, is familiar with the Internet, and is familiar with HTML. This course does not provide basic computer, Internet, or introductory HTML concepts. A student who isn't familiar with basic computer terminology, or who hasn't used the Internet or HTML should first take the following Element K courses: Windows 95: Introduction or Windows 98: Introduction, Netscape Communicator or Internet Explorer 4.0: Introduction and HTML 4.01: Web Authoring, Level 1.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Create well-formed code that conforms to the XHTML standard.
- Modify tables and create nested tables.
- Control the sizing, spacing, and alignment of images, and understand how image maps work.
- Create Web forms with a variety of different controls.
- Modify form attributes to make forms more usable and navigable.
- Apply the meta tag and understand how JavaScript is embedded into HTML documents.
- Create framed pages.
- Use style sheets (CSS) to design Web documents

## **HTML 4.01: Web Authoring- Level 3**

**Overview:** This course is designed to introduce developers to the elements, attributes, and development techniques of HTML 4.01, particularly those elements and attributes that are only supported by Netscape Navigator 6.0 and later and Microsoft Internet Explorer 6.0 and later. Many elements and attributes in HTML 4.01 have rarely been used due to lack of browser support. These new features add a new level of power, flexibility, and accessibility to Web documents. With the introduction of more standards-compliant browsers, developers can now use these new techniques to build more efficient, usable, and standards-compliant Web sites. This course was developed using Netscape Navigator 6.1 (preview release), and Internet Explorer 6.0 (beta). To complete this course, you must have at least one of these browsers installed on your machine-preferably Netscape Navigator 6.1 (or later) and Internet Explorer 6.0 or later. Using browsers older than these will produce inconsistent results or no results at all, since the elements and attributes covered in this book are only supported in the more standards-compliant

generation of browsers. Also, data files will not be displayed as intended, since most are built with HTML 4.0 and CSS markup. To complete this course successfully, you must use the latest browsers available. The sample files in this course are not necessarily intended as design suggestions or principles. The sample files are meant to provide the student with solutions that are easy to grasp, and to a certain extent, represent realistic applications. The concepts and tasks in this book are designed to be completed sequentially. Each topic builds on previous experience, so it makes sense to complete the tasks in the order they appear. You might want to skip certain tasks if you are already familiar with the material, but in some cases, this might lead to different results than you'll see in the screenshots throughout the book. Some of the files for this course have “solution files” that you can use to check your work if you're not sure how to proceed in a task. These files begin with “x”, followed by the name of the file they're associated with.

**Prerequisites:** To ensure your success, we recommend you first take the following Element K courses or have equivalent knowledge: HTML 4.01: Web Authoring, Level 1, and HTML 4.01: Web Authoring, Level 2. You should also have intermediate-level experience with Cascading Style Sheets (CSS). Because HTML 4.0 and CSS are woven together, it's important to learn the syntax, properties, and values involved with CSS to get the most out of your design implementations. If you don't have intermediate-level experience with CSS, we strongly recommend you first take the Element K course Web Development with Cascading Style Sheets

**Description:** Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Apply logical elements to documents and use CSS to attach style rules.
- Create accessible links with additional functionality.
- Create advanced forms with enhancements for usability, accessibility, and style.
- Create advanced table structures with enhancements for usability, accessibility, and style.

- Create inline frames and modify their appearance and functionality.
- Use the DOCTYPE switch to get the most out of current standards support without affecting older pages.

## **Adobe Illustrator 10: Level 1**

**Overview:** *Illustrator® 10 Level 1* is a hands-on instruction book that will introduce you to the basics of Adobe® Illustrator® 10. Adobe Illustrator is a sophisticated graphics program capable of creating complex and attractive illustrations and type effects. In this course, you will learn many of the basic skills that will allow you to take advantage of Illustrator's powerful tools.

**Prerequisites:** We designed *Illustrator® 10: Level 1* for the student who has little or no experience using Adobe Illustrator and who needs to learn the basics skills that are necessary to begin using this program effectively. Before taking this course, you should have a basic understanding of your computer's operating system. For example, you should know how to launch an application, create and save files, and copy files from CD and other media.

**Certification:** *Illustrator® 10: Level 1* is one of three Element K courseware titles that address the Adobe Certified Expert (ACE) Program objectives for the Illustrator 10.0 exam. The ACE Program is for graphic designers, Web designers, developers, systems integrators, value-added resellers, and business professionals who seek recognition for their expertise with specific Adobe products. Certification candidates must pass a product proficiency exam in order to become an Adobe Certified Expert.

**Description:** Course length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Manipulate Illustrator's various palettes and navigate in the Adobe Illustrator environment.
- Create and modify paths using the Pencil, Pen, Erase, and Selection tools.

- Draw and edit geometric objects.
- Apply fill and stroke attributes, colors, gradients, and transparency to objects and paths.
- Use layers to manage complex illustrations.
- Enter and format type in an illustration, and create eye-catching type effects.
- Prepare Illustrator files for print and for Web use.

## Adobe Illustrator 10: Level 2

**Overview:** In this course, you will use Adobe® Illustrator® 10 to create dynamic graphics using advanced drawing and editing tools, path editing techniques, filter effects, and masks. You'll take advantage of Illustrator features such as the Transparency palette, live effects, and the Appearance palette to create engaging effects.

**Prerequisites:** To ensure your success, we recommend you first take the following Element K course or have equivalent knowledge: *Illustrator® 10: Level 1*

**Certification Illustrator® 10: Level 2** is one of three Element K courseware titles that address the Adobe Certified Expert (ACE) Program objectives for the Illustrator 10.0 exam. The ACE Program is for graphic designers, Web designers, developers, systems integrators, value-added resellers, and business professionals who seek recognition for their expertise with specific Adobe products. Certification candidates must pass a product proficiency exam in order to become an Adobe Certified Expert.

**Description:** Course length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon

successful completion of this course, students will be able to:

- Draw with advanced object drawing tools and dynamically change their settings.
- Use advanced path editing techniques such as splitting, duplicating, and simplifying.
- Create and edit exciting graphics using a gradient mesh and blends between objects.
- 
- Perform exact transformations to move, rotate, reflect, and shear visually or in precise increments.
- Modify compound paths, create compound shapes, and combine paths with the Pathfinder palette.
- Convert vector images to raster and apply specialized filters.
- Copy and paste live effects, dynamically edit the vector images that use them, and use the Appearance palette to manage the application of effects and styles.
- Create layer masks and edit clipping masks.

## **Adobe Illustrator 10: Level 3**

**Overview:** In this course, you will learn to use Adobe® Illustrator® to work with several graphic formats. You will create dynamic effects using patterns and brushes. You will also use advanced text manipulation techniques to effectively integrate text into your illustrations.

**Prerequisites:** We designed *Illustrator® 10: Level 3* for the student who has experience with Illustrator 10 and wants to move beyond the basic concepts. To ensure your success, we recommend you first take the following Element K courses or have equivalent knowledge: *Illustrator 10: Level 1 & Illustrator 10: Level 2*

**Certification:** *Illustrator® 10: Level 3* is one of three Element K courseware titles that address the Adobe Certified Expert (ACE) Program objectives for the Illustrator 10.0 exam. The ACE Program is for graphic designers, Web designers, developers, systems integrators, value-added resellers, and business professionals who seek recognition for their expertise with specific Adobe products.

Certification candidates must pass a product proficiency exam in order to become an Adobe Certified Expert.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Import graphics that use several different file formats, both linked and unlinked, and export graphics and animations using several different file formats.
- Create, edit, and apply tiled patterns, and design, customize, and employ special brushes to create dynamic visual effects.
- Adjust the size of the art board to create oversize prints, and reset the default angle to enable perspective drawing with guides.
- Import and format text with advanced type editing options such as auto hyphenation, smart punctuation, linked text boxes, and text wrapping.
- Match colors between Illustrator and other applications that use color management.
- Perform trapping to prevent gaps in printing due to potential misregistration.
- Prepare to print a color separation and apply printer's marks to a document.

## **Adobe Illustrator 9: Introduction**

**Overview:** Adobe Illustrator 9 Introduction is a hands-on instruction book that will introduce you to the basics of Illustrator 9.0. Adobe Illustrator is a sophisticated graphics program capable of creating complex and attractive

illustrations and type effects. In this course, you will learn many of the basic skills that will allow you to take advantage of Illustrator's powerful tools.

**Prerequisites:** We designed Adobe Illustrator 9 Introduction for the student who has little or no experience using Adobe Illustrator and who needs to learn the basics skills that are necessary to begin using this program effectively. Before taking this course, you should have a basic understanding of your computer's operating system. For example, you should know how to launch an application, create and save files, and copy files from CD and other media.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Navigate in the Adobe Illustrator environment.
- Master the use of the Pencil and Pen tools to create paths.
- Use several tools to manipulate and modify paths.
- Create and edit geometric objects.
- Apply fill and stroke attributes to objects and paths.
- Define process colors and gradients and work with spot colors.
- Use layers to manage complex illustrations.
- Use the Transparency palette to change the opacity of selected objects.
- Enter and format type in an illustration, and create eye-catching type effects.

## **Adobe Illustrator 9: Intermediate**

**Overview:** In this course, you will use Adobe Illustrator 9.0 to create dynamic

graphics using advanced drawing and editing tools, path editing techniques, filter effects, and masks. You will also take advantage of the latest features added to Illustrator, including the Transparency palette, live effects, and the Appearance palette, to create effects that were unattainable in previous versions.

**Prerequisites:** To ensure your success, we recommend you first take the following Element K course or have equivalent knowledge: *Illustrator 9.0: Introduction*.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Draw with advanced object drawing tools and dynamically change their settings.
- Use advanced path editing techniques such as the Pathfinder commands, the Scissors and Knife tools, the Lasso selection tools, the Align palette, Compound paths, and guides.
- Perform exact transformations to move, rotate, reflect, and shear visually or in precise increments.
- Convert vector images to raster and apply specialized filters.
- Copy and paste live effects and dynamically edit the vector images that use them.
- Use the Appearance palette to manage the application of effects and styles.
- Create and edit exciting graphics using a gradient mesh and blends between objects.

## **Adobe Illustrator 9: Advanced**

**Overview:** In this course you will learn to use Illustrator to work with several graphic formats. You will create dynamic effects using patterns and brushes. You will also use advanced text manipulation techniques to effectively integrate text into your illustrations.

**Prerequisites:** We designed Illustrator 9.0 Advanced for the experienced student who has completed the Illustrator 9.0 Intermediate class or has an equivalent level of proficiency in Illustrator. Before taking this course you should be familiar with creating paths, using the Appearance, Layers, and Transparency palettes, applying filters and transformations, and editing the fill and stroke of a path.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Import graphics that use several different file formats, both linked and unlinked, and export graphics using several different file formats.
- Export an illustration to the Flash format as a working animation.
- Create and edit tiled patterns and apply them to objects and paths.
- Design, customize, and employ special Art, Calligraphic, Pattern, and Scatter brushes to create dynamic visual effects.
- Adjust the size of the artboard to create oversize prints and reset the default angle to enable perspective drawing with guides.
- Import and format text with advanced type editing options such as auto hyphenation, smart punctuation, linked text boxes, and text wrapping.
- Match colors between Illustrator and other applications that use color management.
- Perform trapping to prevent gaps in printing due to potential misregistration.
- Prepare to print a color separation and apply printers marks to a document.

## **Microsoft Internet Explorer 6.0: Introduction**

**Overview:** This course is designed for persons desiring to use the newest version

of Internet Explorer for viewing the Internet. More than likely you have heard of the Internet and know that it offers you all sorts of new ways to communicate, obtain information, and even purchase items. None of these tasks can be accomplished if you don't know how to use an Internet browser. In this course, you will use Internet Explorer to browse the Web.

**Prerequisites:** To ensure your success, we recommend you first take the following Element K course or have equivalent knowledge: *Windows 98/2000/XP: Introduction*

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Display web sites.
- Search for information.
- Communicate with others using the Internet.
- Acquire information from the Internet.

## **Microsoft Office 97 to Office 2002 (XP): New Features**

**Overview:** This course serves as a quick reference to new and improved features since Office 97 and guides students through the transition process.

**Prerequisites:** Students enrolling in this course should be comfortable in the Windows environment. They should have completed one of the following courses: *Windows 2000: Introduction*, or have equivalent knowledge. In addition, this course assumes that students have a working knowledge of Microsoft Office 97.

**Description:** Course length (1/2 day). Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Use and customize components of the interface common to all Office XP programs, including adaptive menus and toolbars, task panes, common dialog boxes, and the Office Assistant and online Help.
- Use new and improved features across the suite, including the Office Clipboard, the Media Gallery, e-mail tools, the Office Template Gallery, and organization charts.
- Explore and use new document management features across the suite, including Detect and Repair, the Save My Settings Wizard, and the Privacy feature, to manage your documents and the Office XP environment.
- Perform basic Web authoring tasks in Office XP, including saving, previewing, and managing HTML files, review the basic features of the Microsoft Document Imaging and Microsoft Document Scanning applications, and work with Microsoft Photo Editor.

## **Microsoft Office 2000 to Office XP**

**Overview:** Students will learn how to use the most commonly used new features of the applications in Microsoft Office XP.

**Prerequisites:** Windows 2000: Introduction, Word 2000: Level 1, Excel 2000: Worksheets, PowerPoint 2000: Level 1, Access 2000: Level 1, Outlook 2000: Level 1 or equivalent knowledge.

**Description:** Course length 1/2 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Use the new features of Office XP that are common to all the applications.
- Use the new features of Word 2002 (XP).
- Use the new features of Excel 2002 (XP).
- Use the new features of PowerPoint 2002 (XP).

- Use the new features of Access 2002 (XP).
- Use the new features of Outlook 2002 (XP).

## **Microsoft Outlook 2003 Level 1**

**Overview:** This course is the first in a series of three Microsoft® Office Outlook® courses. It will provide you with the skills you need to start sending and responding to email in Microsoft® Outlook® 2003, as well as maintaining your Calendar, scheduling meetings, and working with tasks and notes.

**Prerequisites:** This course assumes that you are familiar with using personal computers and have used a mouse and keyboard; basic typing skills are recommended. You should be comfortable in the Windows environment and be able to use Windows to manage information on your computer. Specifically, you should be able to: launch and close programs; navigate to information stored on the computer; and manage files and folders.

**Description:** Course Length: 1 day. . Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Identify the components of the Outlook environment and compose and respond to a simple message.
- Compose messages.
- Use folders to manage mail.
- Schedule appointments.
- Schedule meetings.
- Manage contacts and contact information.
- Create and edit tasks.
- Create and edit notes.

## **Microsoft Outlook 2003 Level 2**

**Overview:** If you have been using Microsoft® Office Outlook® 2003 as a communications tool, then you know how to send a mail message; schedule appointments and meetings; and create contacts, tasks, and notes. This course is the second in a series of three Microsoft Outlook courses. It provides you with the necessary skills to customize your Outlook environment, your calendar, and your mail messages so that they meet your specific needs. You will also learn how to track, share, assign, and quickly locate various Outlook items.

**Prerequisites:** Outlook 2003 Level 1 Introduction or equivalent knowledge and skills.

**Description:** Course Length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Track work activities using the Outlook Journal.
- Customize the calendar by setting various calendar options.
- Modify message options.
- Make folder information available to other Outlook users.
- Assign and track tasks.
- Customize the Outlook environment.
- Sort, find and color-code items in your mailbox and calendar.

## **Microsoft Outlook 2002 (XP): Level 1 (Introduction)**

**Overview:** In this course, you will learn the basics of using Microsoft Outlook 2002 (XP) as a communications tool. You will send and receive mail messages, use a calendar to schedule appointments, and coordinate business meetings with multiple participants. You will also keep track of personal and business contacts,

and create task lists and notes to remind you of things that need to be done.

**Prerequisites:** To ensure your success, we recommend you first take the following Element K course or have equivalent knowledge of Windows 2000: Introduction.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Address and compose a message, change the message format, check the spelling and grammar and then send the message. You will also attach a file to a message and send a message with voting buttons.
- Open a message in your inbox, reply to it and forward it to others. You will also print and delete messages.
- Add an appointment and an event to your calendar, including a recurring appointment, and assign a category to an appointment. You will also print your calendar.
- Schedule a meeting with multiple participants, reply to meeting requests, and track meeting responses.
- Add a contact to the contact folder and view the contact list in different ways. You will also sort contacts and assign categories to contacts. Finally, you will update contact information.
- Add tasks to a task list and edit them as needed. You will also assign categories to tasks and assign tasks to contacts.
- Sort messages and find a specified message. You will also organize your mailbox by creating additional folders and moving them around, and deleting folders.
- Create a note and move it to your desktop, assign a category to a note, and assign a note to a contact.

**Microsoft Outlook 2002 (XP): Level 2 (Intermediate)**

**Overview:** Students will use more advanced Microsoft Outlook 2002 (XP) features for communication and organization. Topics covered include customizing your messages, organizing your mailbox, and coordinating schedules, saving and archiving mail, and sharing Outlook data. The course is suitable for persons preparing to be certified Microsoft Office User Specialist (MOUS) in Outlook.

**Prerequisites:** Windows 2000: Introduction, and Outlook 2002 (XP): Level 1.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Add stationery to your mail messages, create custom stationery, modify message settings and deliveries options, and notify users when you are out of the office.
- Share contacts with other users, export contact lists, link items to a contact, forward a note to a contact, create and use a personal distribution list, and manage another user's contact.
- Delegate a task, reply to a task request, specify settings for tracking assigned tasks, view tasks assigned to others, and share task information with other users.
- Assign messages to categories, group messages, sort and collect messages using multiple criteria, organize messages by using colors, filter messages, and sort messages using Advanced Find
- Customize Outlook menus and toolbars, create shortcuts and custom views, customize the Outlook Today page, specify start-up settings, and protect personal folders.
- Specify calendar permissions, view other users' calendar, save a calendar as a web page, create a group schedule, display a different time zone, apply conditional formats to calendar appointments, and flag an appointment as private.
- Save messages in alternate file formats, archive messages manually and automatically, and clean up your mailbox.
- Create a public folder, post to a public folder, and reply to a public post and edit a public post.

## **Microsoft Outlook 2002 (XP): Level 3 (Advanced)**

**Overview:** Students enrolling in this course will learn additional Outlook skills including importing data, performing a mail merge, using Instant Messenger from Outlook, accessing a newsgroup, using the Journal, configuring and securing Outlook, using the Internet with Outlook, working offline or remotely, and creating custom forms.

**Prerequisites:** Students enrolling in this class should be familiar with personal computers and be able to use Outlook 2002 to send, receive, and manage mail messages, schedule and manage appointments, meetings, and events, and create and manage contacts, tasks, and notes. It also assumes that students can customize their Outlook environment and work with Public folders. Recommended courses: Windows 2000: Introduction, Outlook 2002: Level 1, Outlook 2002: Level 2, Word 2002: Level 1

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- You will work with Contact data to import information, to perform a mail merge, and to map an address.
- You will use MSN Messenger to send and respond to an instant message, as well as access a newsgroup to view messages.
- You will use Outlook's Journal tool to record, create, and open journal entries.
- You will configure a dial-up connection, add an account, and set global security options.
- You will interact with the Internet to share free/busy calendar information, schedule an online meeting, add a Web page shortcut, create a folder home page, and insert a hyperlink in an e-mail message.
- You will learn the necessary steps involved to work either offline or remotely, including creating an offline folder, synchronizing offline folders, configuring startup options, and downloading messages.

- You will create, save, and test a custom form.

## Microsoft Outlook 98 to Outlook 2002 (XP)

**Overview:** This course serves as a quick reference to new and improved features since Outlook 98 and guides students through the transition process.

**Prerequisites:** Students enrolling in this course should have completed the following courses: Microsoft Office 97 to Office XP: New Features, Outlook 98 or 2000:Level 1, Outlook 98 or 2000: Level 2. In addition, this course assumes that the student has a working knowledge of working offline with Outlook.

**Description:** Course description 1/2 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Use the Outlook Shortcut Bar and customize the Outlook Today page. Use new and improved Outlook mail features like the default editor Microsoft Word, smart tags, hyperlinks, hotmail, mail merge, the enhanced find feature, the rules wizard, and cleaning up your mailbox.
- Propose a new meeting time directly from a meeting request, control the ability to offer a counter proposal time, and book office resources directly from the Exchange server. Students will customize their calendar using colors, create a group schedule, and review the enhanced Reminder window. Find contacts, add a display as field to a contact, resize Address Book column headings, create a distribution list using contacts, flag contacts for follow-up, and track contact activity.
- Create an email message and add a new contact directly from the Web browser. View Web pages from Outlook, add a Web page shortcut to the Outlook Bar, specify a Web page to be displayed as a home page, save their calendar as a Web page, and explore the process for sharing their free and busy calendar time over the Internet.
- Create an offline folder, download the Address Book, synchronize offline folders, and create a send/receive group.

## **Netscape 4.7: Introduction**

**Overview:** Students will learn how to use Netscape Navigator to effectively find information on the World Wide Web. They will also learn how to use Netscape Messenger to access email and newsgroups. In addition, students will learn how to customize the Communicator environment and the My Netscape portal and will be exposed to the online help system and downloading files.

**Prerequisites:** An introductory Windows course or equivalent knowledge.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Identify uses for the Internet and the World Wide Web.
- Use Netscape Navigator to find information on the Web; use Netscape's Netcenter.
- Download and unzip files.
- Maintain a system for returning to desired Web pages by using bookmarks.
- Use Communicator's online Help system.
- Communicate with other Internet users by using Netscape Messenger's email system and access to newsgroups.
- Customize the Netscape Communicator environment by using the Preferences dialog box; customize the My Netscape portal by registering for Netcenter and selecting personalization options.

## **PageMaker 7.0: Level 1**

**Overview:** Adobe PageMaker is a powerful page layout application you can use to create

professional looking publications. In this course, you will learn basic techniques and skills that will give you a solid understanding of the software as you create a four-page color newsletter. PageMaker is a robust application that offers a high degree of control over many aspects of page design. To learn how to use it to its fullest capabilities, you need to understand basic principles and techniques. As you progress through this course, you'll learn these techniques and use them to work with PageMaker efficiently and produce great looking documents.

**Prerequisites:** To ensure your success, we recommend you have experience using your computer's operating system.

**Certification:** PageMaker® 7.0: Level 1 is one of two Element K courseware titles that address the Adobe Certified Expert (ACE) Program objectives for the PageMaker 7.0 exam. The ACE Program is for graphic designers, Web designers, developers, systems integrators, value-added resellers, and business professionals who seek recognition for their expertise with specific Adobe products. Certification candidates must pass a product proficiency exam in order to become an Adobe Certified Expert.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Navigate in the PageMaker environment.
- Set up a document.
- Import text and graphics.
- Format text using fonts, sizes, type styles, indents, alignment, and tabs.
- Use styles to format text.
- Use master pages and guides to design a document's layout.
- Add page numbers to a document.
- Wrap text around a graphic.
- Create a booklet

- Create and use templates.

## PageMaker 7.0: Level 2

**Certification:** PageMaker® 7.0: Level 2 is one of two Element K courseware titles that address the Adobe Certified Expert (ACE) Program objectives for the PageMaker 7.0 exam. The ACE Program is for graphic designers, Web designers, developers, systems integrators, value-added resellers, and business professionals who seek recognition for their expertise with specific Adobe products. Certification candidates must pass a product proficiency exam in order to become an Adobe Certified Expert.

**Course Description:** Adobe PageMaker is a powerful page layout application you can use to create professional publications. In this course, you will learn advanced techniques and skills as you create a full-page color advertisement for publication in a magazine, and a catalog with tables that you will prepare for both print output and as an Acrobat PDF file designed for desktop printing or electronic distribution via the Web. Although PageMaker is a robust application that offers fine control over typography, page layout, colors, and printing, not all of its features are on the surface, so you may be missing out on the best ways to create professional-caliber publications. Additionally, you need some background information in each of those areas to fully exploit them and to create as polished a document as possible. As you create the documents in this course, you'll delve deeply into each of these areas, enabling you to work efficiently and get great results.

**Prerequisites:** To ensure your success, we recommend you first take the following Element K course or have equivalent knowledge: *PageMaker 7.0: Level 1*

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Choose fonts appropriately.
- Balance columns.
- Use frames to contain graphics.

- Organize a document using layers.
- Use color management and set up color separations for four or more ink printing.
- Create and format tables using Adobe Table.

## **PageMaker 6.5: Basics**

**Overview:** Students will learn the basic skills necessary to use the PageMaker for Windows program.

**Prerequisites:** Windows 98: Introduction, Windows 2000: Introduction, or equivalent knowledge. An introductory Windows word processing class is strongly suggested.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Understand the basic concepts of desktop publishing and identify elements of the PageMaker environment
- Create and save a document
- Use text, and graphics and import graphics
- Work with multi-page documents by using master pages and inserting pages
- Create and manipulate frames
- Format text
- Import and manipulate graphics
- Attach text to a frame

- Copy items between documents
- Print documents

## **PageMaker 6.5: Type Design**

**Overview:** Students will learn the intermediate skills necessary to use the PageMaker for Windows program.

**Prerequisites:** Windows 98: Introduction, Windows 2000: Introduction, or equivalent knowledge, PageMaker 6.5: Basics course, An introductory Windows word processing class is strongly suggested.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Create automatic page numbers
- Create, format and manipulate tables
- Use the Story Editor to check spelling and change text
- Use typography techniques such as line length, typefaces, paragraph spacing, hyphenation & justification, kerning and tracking.
- Apply type effects such as pulling quotes and dropping caps
- Create a table of contents

## **PageMaker 6.5: Production 1**

**Overview:** Students will learn the intermediate-advanced skills necessary to use the PageMaker for Windows program.

**Prerequisites:** Windows 98: Introduction, and Windows 2000: Introduction, or equivalent knowledge.

PageMaker 6.5: Type Design course. An introductory Windows word processing class is strongly suggested.

**Description:** Course length: a day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Use the Grid Manager Plug-In
- Use frames within templates
- Create multiple master pages
- Use text and graphics within a template
- Draw and manipulate graphics
- Define, apply, and create new colors
- Apply graphic formats such as vector and raster
- Save a page as a graphic
- Understand contrast and halftones
- Link graphics
- Print color separation and proofs

## **PageMaker 6.5: Production 2**

**Overview:** Students will learn the advanced skills necessary to use the PageMaker for Windows program.

**Prerequisites:** Windows 98: Introduction, Windows 2000: Introduction, or equivalent knowledge, PageMaker 6.5: Production 1 course, an introductory Windows word processing class is strongly suggested.

**Description:** Course length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Structure a document
- Transform graphics
- Import HTML
- Work with indexes and table of contents
- Manage color by setting up a Color Management System
- Set CMS preferences
- Import image profiles
- Choose device profiles while printing
- Define and perform Traps
- Perform advanced printing functions
- Understand electronic publishing
- Create Acrobat PDF files
- Export to HTML

**Organize Your Business Day And Increase Efficiency Using A Palm**

## Pilot Vx

**Overview:** This Lab will help students optimize the time they spend entering and managing their Palm Vx information.

**Prerequisites:** Before completing this Lab, students should have an introductory knowledge or experience with using a Palm Vx device. Students should be familiar with the basic applications (Address Book, Date Book, To Do List, and the Memo Pad) and know how to use the onscreen keyboard or Graffiti writing for data entry. This is not a beginner's course on the fundamentals of how to use a Palm Vx device.

**Description:** Course length: 1 day. Upon successful completion of this Lab, students will be able to:

- Import data to the Palm Desktop organizer software and transfer that information to the Palm Vx hand-held device.
- Customize the HotSync operation and beam information between two Palm Vx devices.
- Enter and locate information quickly by using shortcuts, categories, and the Find features.
- Secure private information and lock their Palm Vx device using a password.
- Generate reports in Word and Excel using their Palm Vx information.

## PhotoShop 7.0: Basic Skills 1

**Overview:** In this course, you will learn to use several tools for selecting parts of images, and will move, duplicate, and resize images. You will learn to use layers, and to apply layer effects and filters to create special effects, including lighting and texture effects. Additionally, you will use painting tools and blending modes to create shading effects, and will perform adjustments to contrast and color balance. You will save images in formats for print and Web use.

**Prerequisites:** We designed *Photoshop® 7.0: Level 1* for the student who has little or no experience using Adobe Photoshop, and who needs to learn the basic skills that are necessary in order to begin to use this program effectively. Before taking this course, you should have a basic understanding of your computer's

operating system. For example, you should know how to launch an application, create and save files, and copy files from CDs and other media.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Identify the differences between raster and vector graphics, and manipulate Photoshop's various graphic tools and controls.
- Select appropriate resolutions for different image and output types, and resize and crop image areas.
- Select image areas using the Lasso, Marquee, and Magic Wand tools, and use alpha channels to save and load selections.
- Create and manipulate multiple layers to composite images easily.
- Apply blending and shading effects to create realistic composites.
- Identify the characteristics of bitmap, grayscale, duotone, and color images.
- Select colors using the Color palette, Color Picker, and Eyedropper tool, and use Photoshop's painting tools to create artwork or to retouch photographs.
- Add and format text within an image, and apply layer effects and filters to create special effects including lighting effects and textures.
- Modify the brightness, contrast, color balance, hue, and saturation of images.
- Save images in file formats for use with other applications and the Web.

## **PhotoShop 7.0: Level 2**

**Overview:** In this course, you'll learn skills that go beyond those covered in the *Photoshop® 7.0*:

*Level 1* course. You'll further your understanding of isolating image areas by creating and saving masks with specialized tools, commands, modes, and layer elements. You'll learn how to use vector paths for a variety of purposes, including masking, clipping paths, and illustration. You'll also learn to create and apply creative elements such as gradients, patterns, and color overlays, and to save them along with effects in easy-to-apply layer styles. When you've completed the course, you'll have a firm grasp on Photoshop concepts that are applicable to almost every facet of using the application, including Web design, preparing photographic images for printing, and illustration.

**Prerequisites:** To ensure your success, we recommend you first take the following Element K course or have equivalent knowledge: *Photoshop® 7.0: Level 1*

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Use Quick Mask mode, alpha channels, and layer masks to isolate image areas. Create clipping groups to use one layer's contents to mask another's.
- Create vector paths as tools for selecting images, for creating transparent areas in images to be used with other applications, and for drawing shapes.
- Create color swatches, gradients, and patterns, all of which can be saved and loaded in sets for convenience.
- Create layer styles that can apply effects, colors, patterns, and gradients in one step.
- Use the Background Eraser and the Extract command to create complex masks quickly and accurately, even for images with indistinct edges and very fine details.

## **PhotoShop 7.0: Web Production**

**Overview:** Photoshop 7.0: Web Production is a course that will familiarize you with concepts and techniques important for optimizing images for display on the Internet.

**Prerequisites:** To ensure your success, we recommend you first take the

following courses or have equivalent knowledge: *Photoshop 7.0: Level 1 & Photoshop 7.0: Level 2*

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Use basic techniques and concepts about image resolution and identify factors that contribute to file size.
- Understand GIF, JPEG, and PNG file formats so that you can choose the right one for each image.
- Calibrate your monitor, and preview images for both platforms so you can adjust images to optimize their appearance on both Macintosh and Windows computers; control dithering in images, using it when necessary to improve images, and avoiding it at times when it detracts from the quality; and use the Web palette appropriately to optimize images for viewing on computers displaying only 256 colors.
- Use Photoshop and Image Ready to create layouts of Web pages, aligning items precisely to one another with guides and a grid; and slice complex images into sections, and use Image Ready to generate HTML code that joins the slices together in a table on a Web page, including JavaScript rollovers and URL links.
- Create animated GIF images that combine slow transitions and fast motion effects, while still maintaining small file sizes.

## **PhotoShop 7.0: Artistic Effects**

**Overview:** In this course, you'll expand on the skills covered in the *Photoshop 7.0: Level 1* and *Photoshop 7.0: Level 2* courses by working on a variety of image types. While you'll learn to work with additional specific Photoshop commands and tools, you'll also study concepts that tie together multiple techniques you already know to create effects and make your work more efficient. You'll first work to clean up line art, and then use lots of shortcuts and styling techniques for layers. Then, you'll turn to photographic images, repairing an old damaged picture, softening the focus on one to add atmosphere, and will colorize grayscale images with a variety of techniques. You'll

learn to create realistic three-dimensional effects by distorting layers and applying lighting effects. Lastly, you'll save multi-step processes as actions that you can apply later to any image.

**Prerequisites:** To ensure your success, we recommend you first take the following courses or have equivalent knowledge: *Photoshop 7.0: Level 1 & Photoshop 7.0: Level 2*

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Clean up jagged line art and accurately replace colors in line art with soft edges.
- Apply timesaving shortcuts for selecting, stacking, and blending layers.
- Precisely control layer styles with contours and with combinations of layer effects, as well as by splitting layer effects onto multiple layers.
- Repair and retouch old damaged photos efficiently and accurately.
- Create atmosphere in an image by applying a soft focus effect and adding emphasis to the foreground.
- Colorize grayscale images with a variety of techniques to create hand-tinted and sepia tone effects.
- Wrap a two-dimensional object around a three-dimensional one realistically.
- Use lighting effects and create cast shadows to further simulate three dimensions.
- Transform a photographic image into a painted one with brushes, filters, and blending modes.
- Combine multiple steps into one by saving them as actions.

## **PhotoShop 7.0: Color Correction & Printing**

**Overview:** In this course, you will learn professional techniques for obtaining consistent, predictable, high-quality images from Photoshop. The course addresses color correction processes for each of the three primary uses of Photoshop—desktop printing, Web images, and preparing images for commercial printing. You will learn a balanced approach, starting with system calibration, through the scanning process, image enhancements, color correction, and exporting your image. You will also create traditional printed effects such as duotones and spot color overlays.

**Prerequisites:** *Photoshop 7.0: Color Correction and Printing* was designed for the student who has completed the *Photoshop 7.0: Level 1* and *Photoshop 7.0: Level 2* courses, and who needs to learn color correction techniques, as well as techniques for preparing images for print.

Before taking this course, you should have completed the *Photoshop 7.0: Level 1* and *Photoshop 7.0: Level 2* courses, or have equivalent knowledge. You should also have a basic understanding of your computer's operating system. For example, you should know how to launch an application, create and save files, and copy files from CDs and other media.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Identify the typical uses for color modes, describe the Color Management and Color By The Numbers workflows, and combine the two workflows to create one that will work best for you.
- Calibrate your system for maximum color accuracy.
- Control the scanning process to work with the best possible images in Photoshop.
- Remove defects such as moiré patterns, dust, scratches, noise, and red-eye.
- Perform curve-based color corrections to remove color casts, enhance image detail, and ensure balanced images, and modify the brightness, contrast, color balance, hue, and saturation of images.
- Create custom color separation settings and modify images' gamuts to create quality CMYK output.
- Sharpen images to improve focus and detail.

- Create better grayscale images from RGB files than with Photoshop's default conversion method; and use spot colors to create duotones and spot overlays in images.

## **PhotoShop 6.0: Basic Skills 1**

**Overview:** Students will learn to use several tools for selecting parts of images, and will move, duplicate, and resize images. Students will learn to use layers, and to apply layer effects and filters to create special effects, including lighting and texture effects. Additionally, students will use painting tools and blending modes to create shading effects, and will perform adjustments to contrast and color balance. Students will save images in formats for print and Web use.

**Prerequisites:** Before taking this course, you should have a basic understanding of your computer's operating system. For example, you should know how to launch an application, create and save files, and copy files from CDs and other media.

**Description:** Course length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Select appropriate resolutions for different image and output types.
- Resize and crop image areas.
- Select image areas using the Lasso, Marquee, and Magic Wand tools.
- Use alpha channels to save and load selections.
- Create and manipulate multiple layers to composite images easily.
- Apply blending and shading effects to create realistic composites.
- Select colors using the Color palette, Color Picker, and Eyedropper tool.
- Use Photoshop's painting tools to create artwork or to retouch photographs.
- Add and format text within an image.

- Apply layer effects and filters to create special effects including lighting effects and textures.
- Modify the brightness, contrast, color balance, hue, and saturation of images.
- Save images in file formats for use with other applications and the Web.

## PhotoShop 6.0: Basic Skills 2

**Overview:** Students will further their understanding of isolating image areas by creating and saving masks with specialized tools, commands, modes, and layer elements. Students will learn how to use vector paths for a variety of purposes, including masking, clipping paths, and illustration. Students will also learn to create and apply creative elements such as gradients, patterns, and color overlays, and to save them along with effects in easy to apply layer styles.

**Prerequisites:** Before taking this course, you should complete the Photoshop 6 Basic Skills 1 course or have equivalent knowledge.

**Description:** Course length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Use Quick Mask mode, alpha channels, and layer masks to isolate image areas.
- Create clipping groups to use one layer's contents to mask another's.
- Create vector paths as tools for selecting images, for creating transparent areas in images to be used with other applications, and for drawing shapes.
- Create color swatches, gradients, and patterns, all of which can be saved and loaded in sets for convenience.
- Create layer styles that can apply effects, colors, patterns, and gradients in one step.
- Use the Background Eraser and the Extract command to create complex masks quickly and accurately, even for images with indistinct edges and very fine details.

## PhotoShop 6.0: Web Production

**Overview:** Students will learn basic techniques and concepts about image resolution and methods for reducing file size. Students will also learn about several graphic formats that are appropriate for Web images, and how to choose the best one for various types of images. Students will learn to optimize images for display on multiple platforms. Students will also use Image Ready with Photoshop to prepare images for the Web, and will use Image Ready to create animations.

**Prerequisites:** Completion of the Adobe Photoshop 6.0 Basic Skills 1 and 2 courses, or equivalent knowledge.

**Description:** Course length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Use both Photoshop and Image Ready to create small, efficient Web graphics for fast downloads.
- Understand GIF, JPEG, and PNG file formats to choose the right one for each image.
- Calibrate your monitor, and preview images for both platforms so you can adjust images to optimize their appearance on both Windows and Macintosh computers.
- Control dithering in images, using it when necessary to improve images, and avoiding it at times when it detracts from the quality.
- Use the Web palette appropriately to optimize images for viewing on computers displaying only 256 colors.
- Use Photoshop and Image Ready to create layouts of Web pages, aligning items precisely to one another with guides and a grid.
- Slice complex images into sections, and use Image Ready to generate HTML code that joins the slices together in a table on a Web page, including Java rollovers and URL links.
- Create animated GIF images that combine slow transitions and fast motion effects, while still maintaining small file sizes.

## PhotoShop 6.0: Tips & Tricks

**Overview:** Students will first work to clean up line art, then utilize shortcuts and styling techniques for layers. Then students will turn to photographic images, repairing an old damaged picture, softening the focus on one to add atmosphere, and will colorize grayscale images with a variety of techniques. Students will learn to create realistic three-dimensional effects by distorting layers and with lighting effects. Lastly, students will save multi-step processes to actions that they can apply later to any image.

**Prerequisites:** Completion of the Photoshop 6 Basic Skills 1 and 2 courses, or equivalent knowledge.

**Description:** Course length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Clean up jagged line art and accurately replace colors in line art with soft edges.
- Apply timesaving shortcuts for selecting, stacking, and blending layers.
- Precisely control layer styles with contours and with combinations of layer effects, as well as by splitting layer effects onto multiple layers.
- Repair and retouch old damaged photos efficiently and accurately.
- Create atmosphere in an image by applying a soft focus effect and adding emphasis to the foreground.
- Colorize grayscale images with a variety of techniques to create hand-tinted and sepia tone effects.
- Wrap a two-dimensional object around a three-dimensional one realistically.
- Use lighting effects and create cast shadows to further simulate three dimensions.
- Transform a photographic image into a painted one with brushes, filters, and blending modes.
- Combine multiple steps into one by saving them as Actions.

## PhotoShop 6.0: Color Correction & Printing

**Overview:** Students will learn a balanced approach, starting with system calibration, through the scanning process, image enhancements, color correction, printing proofs, and exporting the image. Students will also create traditional printed effects such as duotones and spot color overlays.

**Prerequisites:** Completion of the Photoshop 6 Basic Skills 1 and 2 courses, or equivalent knowledge.

**Description:** Course length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Calibrate your system for maximum color accuracy.
- Apply appropriate workflows for "Color Management" or "Color by the Numbers" systems.
- Use color separation settings effectively to create quality CMYK output.
- Perform curve-based color corrections to remove colorcasts, enhance image detail, and ensure balanced images.
- Apply unsharp masking and other techniques to enhance image quality.
- Eliminate moiré patterns in scanned images.
- Use spot colors to create duotones and spot overlays in images.
- Modify the brightness, contrast, color balance, hue, and saturation of images.
- Save images in file formats for use with other applications and the Web.

## Microsoft PowerPoint 2003 Level 1

**Overview:** In the past, you have used paper-based overhead systems to give presentations. Now, you want to upgrade those presentations to an electronic format. You can use Microsoft® Office PowerPoint® 2003 to give electronic presentations.

**Prerequisites:** Windows Introduction or equivalent knowledge.

**Description: Course Length:** 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Manipulate an existing PowerPoint presentation.
- Begin creating a presentation.
- Format text slides.
- Add tables to a presentation.
- Chart data in a presentation.
- Modify objects on slides.
- Add images to a presentation.
- Prepare to deliver a presentation.

## Microsoft PowerPoint 2003 Level 2

**Overview:** As a Microsoft® Office PowerPoint® 2003 user familiar with the basics, you're able to convey information clearly without much glitz. That's okay, but you can do better—audiences expect more than the basics. In this course, you will enhance presentations with features that will transform basic presentations into those with a powerful means of communication.

**Prerequisites:** To ensure your success, we recommend that you have taken the

Systematix courses or possess equivalent knowledge. Windows Introduction, PowerPoint 2003 Level 1. Web browsing experience is also strongly recommended.

**Description:** Course length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Create a design template.
- Create organization charts and diagrams.
- Add special effects to a Microsoft® Office PowerPoint® 2003 slide.
- Create a Web-based Microsoft® Office PowerPoint® 2003 presentation.
- Use a Microsoft® Office PowerPoint® 2003 presentation for collaborative workgroup review.
- Use functionality that will enable you to deliver live, self-service, and online presentations.

## **Microsoft PowerPoint 2002 (XP): Level 1 (Introduction)**

**Overview:** Students will learn the basic skills necessary to begin effectively creating presentations in Microsoft PowerPoint.

**Prerequisites:** Windows 98: Introduction, Windows NT 4.0: Introduction, and Windows 2000: Introduction or Windows XP: Introduction or equivalent knowledge.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Start the PowerPoint program, identify on-screen features, and navigate through a presentation.
- Create and edit bullet slides.
- Use PowerPoint drawing tools to create a slide.

- Incorporate clipart and WordArt objects in a slide.
- Create and enhance organization charts, and create and edit graphs.
- Change the overall appearance of a presentation by using design templates and the Slide Master.
- Run a slide show, become familiar with slide show options, and add notes to a slide.
- Preview and save a PowerPoint presentation as a Web page and open a locally stored presentation in Internet Explorer.

## **Microsoft PowerPoint 2002 (XP): Level 2 (Advanced)**

**Overview:** This course is designed for students who are already familiar with PowerPoint on an introductory level and those who need to design templates, create slides with special effects, run various slide show, create presentations for the web, and broadcast and review presentations in their job.

**Prerequisites:** Windows 2000: Introduction, and PowerPoint 2002 (XP): Level 1.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Create a design template that you will apply to a presentation.
- Create a slide that contains enhancements made with sound or visuals.
- Use various techniques to deliver a presentation.
- Create a presentation that can be used on the web.
- Create a presentation from a Word outline, send it for review, and then broadcast it to others.

## **Microsoft PowerPoint 97 to PowerPoint 2002 (XP): New Features**

**Overview:** Students will explore the new features added to Microsoft PowerPoint since PowerPoint 97.

**Prerequisites:** Microsoft Office 97 to Office XP: New Features, PowerPoint 97: Level 1, PowerPoint 97: Level 2.

**Description:** Course length 1/2 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Navigate through the new PowerPoint XP interface, create a slide layout and design using the task pane, and work with PowerPoint's Smart Tags.
- Create and animate a diagram, add animation and drawing tools, and work with PowerPoint's automatic features in a presentation.
- Apply a design and content template to a slide show, and insert multiple masters into a single presentation.
- Preview and save a presentation as a Web page and navigate through the slide show in Internet Explorer, and open, edit, and merge a presentation sent for review.

## **Microsoft Project 2003 Level 1: Creating a Project**

**Overview:** This course is the first in a series of two courses designed for individuals who will use Microsoft Office Project Professional 2003 as a

tool to assist them in managing projects. The topics in this course cover the critical skills necessary to create and modify a project plan file that contains tasks, resources, and resource assignments.

**Prerequisites:** Students should have a good understanding of project management concepts and be familiar with project management terminology such as Gantt Chart, task, critical path, and resource. Knowledge of a Windows operating system is also required.

**Description:** Course Length: 1 day. : Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Create a project plan file and enter task information.
- Create a work breakdown structure by organizing tasks and setting task relationships.
- Assign project resources.
- Finalize the project plan file.

## **Microsoft Project 2003 Level 2: Managing a Project**

**Overview:** Microsoft Project 2003: Level 2 is the second course in the Microsoft Project 2003 series. In Microsoft Project 2003: Level 1 , you used your project management skills to create a complete project plan. This course will build upon that knowledge, and give you the opportunity to work with a project plan once it has entered the project implementation phase.

**Prerequisites:** Students enrolling in this class should have: An understanding of project management concepts. Knowledge of a Windows operating system. Microsoft Project 2003: Level 1 Creating a project.

**Description:** Course Length: 1day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Exchange project plan data with other applications.
- Update a project plan.
- Create custom reports.
- Re-use existing project plan information.

## **Project Fundamentals**

**Overview:** Students will learn the basics of project management.

**Prerequisites:** none

**Description:** Course length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Understand the phases of the Project Management life cycle, and a project manager's role in each phase.
- List basic project success criteria and common reasons for project failure.
- Discuss techniques for setting up a strong project team.
- Name the elements of a Risk Management Plan.
- Discuss techniques for planning and sequencing project activities, including the Work Breakdown Structure and the Network Logic Diagram.
- Identify the Critical Path for completing a project on schedule.
- List the cost elements that should be included in a project budget.
- Discuss techniques for controlling deviation from budgets and schedules.
- Understand key elements of project management communications and reporting tools.
- Identify key activities of project close-out.

## Microsoft Publisher 2002 (XP)

**Overview:** This course, *Publisher 2002*, will build on basic word processing skills and concentrate on desktop publishing concepts as they relate to developing basic publication documents, such as flyers and newsletters.

**Prerequisites:** To ensure your success, we recommend you have basic familiarity with a word processing application, such as Microsoft Word, before taking this course.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Create, modify, save, and print a one-page document using a publication design.
- Create a multi-page document, starting with a blank page, adding pages and page elements.
- Format text by adding tabs, indents, special characters, and automated formatting.
- Insert and modify graphic elements on a page.
- Add and modify rows, columns, text, and formatting in a table to display data on a page.
- Create a logo using drawing tools.
- Create documents that use special paper.

## Microsoft Publisher 2000

**Overview:** Students will learn to create customized documents from scratch. Students will create a multi-page document, import and format text and graphics, and create the document's layout.

**Prerequisites:** Basic knowledge of the Windows operating system.

**Description:** Course length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Navigate in the Microsoft Publisher environment.
- Create new multi-page documents.
- Import text and graphics from other applications.
- Format text using fonts, sizes, type styles, and line spacing.
- Use alignments, tabs, and indents to align text.
- Create common elements such as page numbers and design guides that will appear on each page of a document.
- Create documents containing multiple columns.
- Flow several independent stories throughout a document.
- Wrap text around graphics.

## **Create A Web Site Using MS Publisher 2000**

**Overview:** Students will use Microsoft Publisher to create a newsletter and a Web site.

**Prerequisites:** There is not a course prerequisite for this Lab; however, students should have an intermediate knowledge of Microsoft Office.

**Description:** Course length: 1/2 day. Upon successful completion of this class, students will be able to:

- Create a newsletter and publish it to the Web.
- Design a Web site and customize the Home page.
- Customize the Story and Directory Of Related Links Web pages.
- Add pages to their Web site.
- Make their Web site available.

## **Microsoft Visio 2002 (XP) Professional: Level 1**

**Overview:** In this course, you'll learn fundamental skills while creating several types of diagrams using Visio Professional. You will create a directional map, a block diagram, a basic and a cross-functional flowchart, an organization chart, and an office layout. As you create these drawings, you will learn techniques to drag and manipulate Visio master shapes, create connections between shapes, and apply styles to shapes, text, and pages. You will generate an organization chart from imported data and edit custom properties to store additional information in your diagrams. You will learn shortcuts to enhance your productivity and use unique tools designed for each type of drawing. When you've completed the course, you will have a firm grasp of all of the skills needed to create any kind of diagram using Visio.

**Prerequisites:** We designed for the student who has little or no experience using Visio 2002 Professional, and who needs to learn the basic skills that are necessary in order to begin to use this program effectively. Before taking this course, you should have a basic understanding of your computer's operating system. For example, you should know how to launch an application, create and save files, and copy files from CDs and other media.

**Description:** Course length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Identify the various types of drawings you can create using Visio.
- Drag shapes from Visio stencils and resize, rotate, align, and transform them.
- Increase your productivity with smart features such as numbering shapes automatically and duplicating shapes quickly.
- Create a directional map.
- Quickly locate any master shape within the stencil library.
- Create an organization chart manually or generate one from a text file.
- Create a flowchart or a cross-functional flowchart.
- Apply title, borders, backgrounds, and color schemes to enhance Visio documents.
- Create an office floor plan to scale.

## **Microsoft Visio 2002 (XP) Professional: Level 2**

**Overview:** In this course, you will expand on the knowledge you gained in the course. You will work with many advanced features, including using the drawing tools, creating and working with custom stencils and templates, and sharing your Visio drawings with other applications.

**Prerequisites:** To ensure your success, we recommend you first take the following Element K course or have equivalent knowledge: *Visio 2002 Professional: Level 1 for Windows*

**Description:** Course length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Open and manipulate toolbars and stencil windows in the work area.

- Change background settings to enhance specific drawings.
- Use the drawing tools and Operation command features to create new custom shapes.
- Integrate both simple and complex custom shapes in a drawing.
- Create new masters in a stencil and edit masters.
- Use the Document stencil to quickly take inventory of all the shapes used in a drawing.
- Create a new custom template and use it to quickly create a drawing.
- Create and use styles to quickly format multiple shapes in a drawing.
- Use layers to organize and control shapes in a drawing.
- Link a Visio drawing within a Microsoft Word document and update any changes.
- Link shapes in a drawing to information contained in an external database.
- Convert a drawing to a Web page.
- Use several techniques for preparing a drawing for printing.

## **Microsoft Visio 2002 (XP) Standard: Level 1**

**Overview:** In this course, you'll learn fundamental skills while creating several types of diagrams using Visio Standard. You will create a directional map, a block diagram, a basic and a cross-functional flowchart, an organization chart, and an office layout. As you create these drawings, you will learn techniques to drag and manipulate Visio master shapes, create connections between shapes, and apply styles to shapes, text, and pages. You will generate an organization chart from imported data and edit custom properties to store additional information in your

diagrams. You will learn shortcuts to enhance your productivity and use unique tools designed for each type of drawing. When you've completed the course, you will have a firm grasp of all of the skills needed to create any kind of diagram using Visio.

**Prerequisites:** We designed for the student who has little or no experience using Visio 2002 Standard, and who needs to learn the basic skills that are necessary in order to begin to use this program effectively. Before taking this course, you should have a basic understanding of your computer's operating system. For example, you should know how to launch an application, create and save files, and copy files from CDs and other media.

**Description:** Course length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Identify the various types of drawings you can create using Visio.
- Drag shapes from Visio stencils and resize, rotate, align, and transform them.
- Increase your productivity with smart features such as numbering shapes automatically and duplicating shapes quickly.
- Create a directional map.
- Quickly locate any master shape within the stencil library.
- Create an organization chart manually or generate one from a text file.
- Create a flowchart or a cross-functional flowchart.
- Apply title, borders, backgrounds, and color schemes to enhance Visio documents.
- Create an office floor plan to scale.

## **Microsoft Visio 2000 Professional: Level 1**

**Overview:** Students will learn basic concepts for creating flowcharts, and basic network diagrams. This includes learning the basics for using and creating shapes, printing drawings, creating custom stencils, and many timesaving shortcuts and techniques designed to increase user productivity.

**Prerequisites:** Basic Windows knowledge and a basic understanding of drawing applications are helpful.

**Description:** Course length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Identify Visio file types
- Understand the workings of the drawing window and tools
- Draw basic objects and reshape them
- Import graphics into a drawing
- Identify master shapes and stencils
- Create custom properties for shapes
- Create basic flowcharts
- Create network diagrams
- Know how to use the Property Reporting Wizard
- Understand how to work with drawing related data
- Setup spreadsheets for drawing data
- Print drawings and setup drawings for printers
- Create custom stencils

## Microsoft Visio 2000 Standard: Level 1

**Overview:** Students will learn basic concepts for creating flowcharts, cross-functional flowcharts, and organization charts. This includes learning the basics for using and creating shapes, printing drawings, creating custom stencils, and many timesaving shortcuts and techniques designed to increase user productivity.

**Prerequisites:** Basic Windows knowledge and a basic understanding of drawing applications are helpful.

**Description:** Course length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Identify Visio file types
- Understand the workings of the drawing window
- Draw basic objects and reshape them
- Import graphics into a drawing
- Identify master shapes and stencils
- Create custom properties for shapes
- Create basic flowcharts
- Create cross-functional flowcharts
- Create organization charts
- Know how to use the Page Layout Wizard
- Know how to use the Organization Chart Wizard

- Understand how to create organization charts from a spreadsheet
- Setup spreadsheets for company data to be converted to organization charts
- Print files
- Create custom stencils

## **Microsoft Windows XP: Introduction**

**Overview:** Students will create a document, organize files, work with Windows Messenger, create an efficient work environment, work with media, clean up their system, and find information on the Internet.

**Prerequisites:** *Introduction to Personal Computers Using Windows 98:*

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- You will create a document by using WordPad.
- You will organize the contents of your hard drive by using Windows Explorer.
- You will communicate instantly with others by using Windows Messenger.
- You will create an efficient work environment by using the Control Panel and Accessibility programs.
- You will perform a variety of media tasks by using the Help and Support Center and Media Player.
- You will clean up your system by using My Computer and the Recycle Bin.
- You will find information on the Internet by using Internet Explorer.

## **Microsoft Windows XP: Transition From Windows 2000**

**Overview:** In this course, the student will explore the new Windows XP environment, learn how to work offline, use the newest version of Internet Explorer, use Windows Messenger, explore Windows Media Player, and use Windows Movie Maker. This course is designed for persons who already are familiar with and comfortable working in Windows 2000 and want to know the new features in Windows XP from Windows 2000. This course is not for students who are first-time Windows users.

**Prerequisites:** *Windows 2000: Introduction*

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- The student will switch views using the new Control Panel, open multiple files from the My Documents folder, view his/her hard drive from the My Computer folder, customize the user interface, use the new Help and Support to find help information, and will create and switch users.
- The student will use Internet Explorer 6.0.
- The student will use Windows Messenger.
- The student will use Windows Movie Maker.

## **Introduction To Personal Computers Using Microsoft Windows 2000**

**Overview:** Students will learn the basic skills necessary to operate a personal computer.

**Prerequisites:** There are no prerequisites for this course.

**Description:** Course length 1/2 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Prepare to use a personal computer.
- Start a personal computer.
- Use application software.
- Using a network.

## **Microsoft Windows 2000: Introduction**

**Overview:** Students will learn basic computer concepts and skills related to IBM and compatible computers. Students will receive a thorough introduction to the domain environment. In addition, they will learn Windows 2000 techniques and become acquainted with applications.

**Prerequisites:** None.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Log on to Windows 2000, shut down and restart the operating system, and work with desktop objects and windows.
- Navigate to information stored on the computer.
- Use Windows Explorer to manage files and folders.
- Use common Windows 2000 program techniques by working with WordPad and Paint.
- Customize the Windows 2000 desktop to best suit your needs.

- Use My Network Places to browse the network and view connections; use the Active Directory to browse and search shared folders; activate the Offline Files feature, make changes to a file, and then synchronize the copies on the domain and their computers.
- Manage and administer the workstation by using the Microsoft Management Console, the Control Panel, and the NTFS used in Windows 2000.

## **Microsoft Windows 2000: Transition From Windows 98**

**Overview:** Students will learn about new and improved features of Windows 2000. Students will learn how to get started in the secure Windows 2000 environment, how to take advantage of usability improvements, how to use My Network Places and the Active Directory, and how to manage and administer the workstation. In general, they will learn how to apply their knowledge of Windows 98 in order to use Windows 2000 efficiently.

**Prerequisites:** *Windows 98: Introduction*, or *Windows 98: Transition from Windows 95*, or equivalent knowledge. Students enrolling in this course should understand how to use Windows 98.

- Describe the differences between Windows 98 and Windows 2000; log on to Windows 2000; and shut down and restart the operating system.
- Identify changes to the Windows 2000 user interface, including those on the desktop, the taskbar, the Start menu, and within Windows Explorer; and identify new features such as the Search feature, the Help feature, and Windows 2000 programs.
- Use My Network Places to browse the network and view connections; use the Active Directory to browse and search shared folders; activate the Offline Files feature, make changes to a file, and then synchronize the copies on the domain and your computer.
- Manage and administer the workstation by using the Microsoft Management Console, new features of the Control Panel, and the NTFS file system used in Windows 2000.

## Microsoft Windows 98: Introduction

**Overview:** Students will learn the benefits of working with personal computers and of using Windows 98 to manage information, to run programs, and to access the Web. Students will learn computer, network, and Internet basics. In addition, they will learn how to use the Windows 98 environment to locate and manage information, to work with Windows 98 programs, to customize the desktop, and to access and browse the Web.

**Prerequisites:** None. However, if students have little or no experience with computers, they may benefit from completing an Introduction to Personal Computers course before taking this course. That course will increase their understanding of the basics of personal computers and in working with hardware devices.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Use fundamental personal computing concepts and terminology
- Work with Windows 98 desktop objects and windows
- Navigate to information stored on their computer
- Use Windows Explorer to manage files and folders
- Use common Windows 98 program techniques by working with WordPad and Paint
- Customize the Windows 98 desktop to best suit their needs
- Access the Internet and use the basic functions of the Internet Explorer environment

## Microsoft Word 2003 Level 1

**Overview:** Word processing is the use of computers to create, revise, and save documents for printing and future retrieval. This course is the first in a series of three Microsoft® Office Word 2003 courses. It will provide you with the basic concepts required to produce basic business documents.

**Prerequisites:** This course assumes that you are familiar with using personal computers and have used a mouse and keyboard (basic typing skills are recommended). You should be comfortable in the Windows environment and be able to use Windows to manage information on your computer. Specifically, you should be able to launch and close programs; navigate to information stored on the computer; and manage files and folders.

**Description:** Course Length: 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Create a basic document.
- Edit documents by locating and modifying text.
- Format text.
- Format paragraphs.
- Use Word tools to make your documents more accurate.
- Add tables to a document.
- Add graphic elements to a document.

- Control a document's page setup and its overall appearance.

## **Microsoft Word 2003 Level 2**

**Overview:** If you use Microsoft® Office Word 2003 on a regular basis, then once you have mastered the basic skills, the next step is to improve your proficiency. To do so, you can customize and automate the way Microsoft® Word 2003 works for you, and you can improve the quality of your work by enhancing your documents with customized Microsoft® Word 2003 elements. In this course, you will increase the complexity of your Microsoft® Word 2003 documents by adding components such as customized lists, tables, charts, and graphics. You will also create personalized Microsoft® Word 2003 efficiency tools.

**Prerequisites:** Students should be able to use Microsoft® Word 2003 to create, edit, format, save, and print basic business documents that contain text, basic tables, and simple graphics. Students can obtain this level of skill by taking the following Systematix course: Microsoft Word 2003: Level 1

**Description:** Course Length: 1 Day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Manage data in lists.
- Customize tables and charts.
- Customize formatting.
- Work with custom styles.
- Modify pictures in a document.
- Create customized graphic elements.
- Control text flow.
- Automate common tasks.
- Automate document creation.

- Perform mail merges.

## **Microsoft Word 2003 Level 3**

**Overview:** You know how to use Microsoft® Office Word 2003 to create and format typical business documents. But you need to work on more complex documents. In this course, you will learn how to use Word to create, manage, revise, and distribute long documents, forms, and Web pages.

**Prerequisites:** Students should be able to use Microsoft® Office Word 2003 to create, edit, format, save, and print business documents that contain text, tables, and graphics. Students should also be able to use a Web browser and an email program. A basic understanding of XML would also be helpful. In order to understand how Word interacts with other applications in the Microsoft Office System, students should have a basic understanding of how worksheets and presentations work. To ensure your success, we recommend you first take the following Systematix courses or have equivalent knowledge: Word 2003: Level 1 and Word 2003: Level 2

**Description:** Course Length: 1 Day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Use Word with other programs.
- Collaborate on documents.
- Add reference marks and notes to a document.
- Make long documents easier to use.
- Secure documents and document information.
- Create Web pages.
- Create a form.
- Use XML in Word.

## **Microsoft Word 2002 (XP): Level 1**

**Overview:** Students enrolling in this course will learn the basics for creating and revising business documents using Word 2002 (XP). Topics covered include creating a document, editing text, formatting text, adding tables, using Word timesavers, and displaying and printing options. It is also intended for persons desiring to prepare to be a certified Microsoft Office User Specialist (MOUS) in Word.

**Prerequisites:** Windows 2000: Introduction. This course assumes that you are familiar with the benefits of using personal computers and have used a mouse and keyboard. You should be comfortable in the Windows environment and able to use Windows to manage information on your computer. Specifically, you should be able to navigate to information stored on the computer, manage files and folders, and work with multiple windows at one time. This course also assumes that you have limited experience with a word-processing program or that you are switching to Word from a different word-processing program.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Create a simple document, save a document, use some automatic text features for entering text, and access online help.
- Edit a document using a variety of techniques.
- Change the appearance of a document by applying various character formats and effects.
- Change the appearance of a document by applying various paragraph formats and effects.
- Manipulate the layout of text by creating columns and adding a table.
- Use Word's templates and wizards, proofing tools, and special characters to efficiently do your work.
- Apply and remove formatting that affects entire pages, previews, and the printing of a document.

## **Microsoft Word 2002 (XP): Level 2**

**Overview:** Students enrolling in this course will learn intermediate Word 2002 (XP) skills including how to create templates, manage table data, create a newsletter, send form letters, create a Web page, and manage document changes. It is also intended for persons desiring to prepare to be certified Microsoft Office User Specialist (MOUS) in Word.

**Prerequisites:** Students enrolling in this course should be familiar with personal computers, and know how to use Word 2002 (XP) to create, edit, format, and print standard business documents complete with tables and graphics. To ensure your success, we recommend you first take the following Element K course or have equivalent knowledge: Windows 2000: Introduction, and Word 2002 (XP): Level 1.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Create and modify custom templates, apply existing styles, and create a custom style.
- Enhance a table by merging table cells, sorting and calculating table data, and creating charts based on various table data.
- Insert, manipulate, and format graphic images.
- Create a newsletter using columns, sections, and graphics.
- Use the Mail Merge Wizard to mail merge form letters, complete with mailing labels.
- Create a Web page, create and edit a hyperlink, as well as enhance a Web page by applying themes.
- Include comments in a document and compare and merge documents.

## **Microsoft Word 2002 (XP): Level 3**

**Overview:** You know how to use Microsoft Word to create and format documents and newsletters. In this course, you'll learn how to use Word to create forms and long documents as well as how to make it easier to display and work with those forms and long documents by using macros and collaborating.

**Prerequisites:** To ensure your success, we recommend you first take the following Element K course or have equivalent knowledge: *Word 2002: Level 1 & Word 2002: Level 2*

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Create and distribute a form.
- Automate tasks by writing and revising macros.
- Create references to information in a document.
- Prepare a document for publication.
- Revise documents based on feedback provided by other users.
- Modify an HTML page in Word.

## **Microsoft Word 97 to Word 2002 (XP)**

**Overview:** This course serves as a quick reference to new and improved features since Office 97 and guides students through the transition process.

**Prerequisites:** Students enrolling in this course should be comfortable in the Windows environment. They should have completed one of the following courses:

Microsoft Office 97 to Office XP: New Features

Word 97: Level 1 (Windows 95) or Word 97: Level 2 (Windows 95), or have equivalent knowledge.

In addition, this course assumes that students have a working knowledge of Microsoft Office 97.

**Description:** Course 1/2 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Work with the new features affecting the environment.
- Explore some of the new features involved with formatting and editing text.
- Explore some of the new features in tables and merging.
- Investigate the many new and improved features for drawing and producing, using, and reading Web pages.

## **Professional Skills & management Course Descriptions and Prerequisties**

### **Customer Service Skills**

**Prerequisites:** None

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Define Customer Service

- Developing Customer Service Skills
- Using Effective Body Language
- Using Your Voice Effectively
- Listening Skills
- Learning Telephone Skills
- Building Blocks of Customer Service
- Working with Challenging Customers
- Managing Stress
- Resource Materials

## **Customer Service for Help Desk Analysts**

**Prerequisites:** None

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Define Customer Service
- The Role of the Help Desk Analyst
- Developing Customer Service Skills
- Creating Customer Service Solutions
- Learning Telephone Skills

- Listening Skills
- Working with Body Language
- Using Your Voice Effectively
- Working with Tough Customers
- Dealing with Stress

## **Project Management Fundamentals**

**Overview:** This course is a primer on the basics of Project Management. It will provide students with the big picture of how Project Management tools and techniques are used to establish a firm foundation for a project, create project plans, choose the most appropriate scheduling method, select and organize a team to perform project tasks, monitor and control ongoing project performance, and close the project upon its completion. Students will also learn how to minimize risk throughout the project life cycle by using contingency planning techniques. This course does not make use of any Project Management software application, but focuses instead on the conceptual underpinning that students must know in order to use any Project Management software application effectively.

**Prerequisites:** None

**Description:** Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course students will be able to:

- Describe the steps in each phase of the Project's Life Cycle and the various roles that Project Management plays throughout.
- Identify the purpose and required elements of a Statement of Work (SOW).
- Discuss techniques used in setting up and running a smoothly functioning project team.

- Identify the elements of a Deliverables Breakdown Structure (DBS) and Work Breakdown Structure (WBS) and the role these documents serve in planning a project.
- Discuss how Gantt Charts and Network Diagrams are used to identify the Critical Path for completing a project on schedule.
- Identify elements of an Activity Plan and the role it plays in documenting time and duration of project activities.
- List elements of a project budget and describe how they are derived.
- Describe how to control for deviation from plans and schedules using Earned Value Analysis techniques.
- List elements of reports documenting project status or requesting changes to the project plan.
- List important steps in project closeout.

## **Project Management Professional® Certification**

**Overview:** Your ability as a project manager to demonstrate best practices in project management—both on the job and through professional certification—is becoming the standard to compete in today's fast-paced and highly technical workplace. This course expands upon the basic concepts of project management you discovered in the Project Management Fundamentals course and covers in-depth the essential elements of managing a successful project. Focusing on the generally accepted practices of project management recognized by the Project Management Institute, Inc. (PMI®), this course offers you a standards-based approach to successful project management across application areas and industries.

**Prerequisites:** To ensure your success, we recommend you first take the following Element K courses or have equivalent knowledge:

- Project Management Fundamentals
- Microsoft Project 2000 Level One
- Microsoft Project 2000 Level Two
- Microsoft Word 2000 Level One
- Microsoft Word 2000 Level Two

**Description:** Course length: 5 days. Upon successful completion of this course, students will be able to:

- Initiate a project.
- Define project scope.
- Develop schedule and cost performance baselines for a project.
- Plan project quality, staffing, and communications.
- Analyze project risks.
- Define project procurement requirements.
- Execute the project.
- Control the project.
- Close the project.

## **Train the Trainer**

**Description:** In this 2 day class, students will learn creative ideas, strategies and

techniques that meet the needs of trainers in the software, telecommunication, educational, manufacturing, insurance and health care industries. Participants will learn training concepts they can immediately apply in the classroom and business settings for both technical and non-technical training.

**Certifications:** Approved by CompTIA for CTT+ as well as Microsoft's MCT and MOUS Master Instructor classroom requirements.

**Prerequisites:** No prior training experience is necessary. Both novice and experienced trainers alike will benefit from this excellent, highly interactive skill-building presentation course.

## **HP OpenView**

**Overview:** HP is the leading provider of IT Service Management solutions - including systems, software, consulting and training. Our comprehensive education solutions can help you develop the knowledge and skills necessary to implement an integrated IT management solution we combine world-class knowledge of network, system and application management, a broad portfolio of training and our education life cycle methodology to deliver the right solution for your training needs.

**Prerequisites** Before taking this course, you should have completed the following training:

- HP OpenView Network Node Manager on UNIX I (B4743S) or HP OpenView Network Node Manager on Windows I (H1662S).
- HP OpenView Network Node Manager II (B4756S) is strongly recommended

**Description:** 40 hours. . Upon successful completion of this course, students will be able to:

- Reduce event noise in the Alarm Browsers to improve operator efficiency.
- Create custom correlators unique to your environment and equipment needs.

- Successfully deploy NNM in large, complex environments.
- Configure additional connectivity discovery including VLANs and meshes.
- Customize Extended Topology monitoring of the protocols and services in your network, such as Overlapping Address Domains (NAT), HSRP, and OSPFP.

Comptia Certification Course Descriptions and Prerequisites



**Prerequisites:** None

**Description:** Course length 5 days. The A+ Certification is a non-vendor, non-product specific program, developed by the Computing Technology Industry Association (CompTIA); it certifies the competency of entry-level technicians in the computer industry. The program is supported by computer hardware and software vendors like General Electric, Digital Equipment, Microsoft, Toshiba, Packard Bell, and IBM. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Identify proper procedures for installing and configuring system components and devices.
- Diagnose and troubleshoot system problems and determine whether they're hardware- or software-related.
- Identify safety procedures, environmental hazards, and preventative maintenance techniques.
- Identify popular motherboards, types of memory, bus architectures, and the purpose of CMOS.
- Define the print process and identify procedures for servicing printers.
- Identify the unique components of portable systems.
- Define basic networking concepts and configure a computer to function on a network.

- Differentiate between effective and ineffective behaviors related to customer satisfaction.

## **i-NET+ Certification**

**Overview:** i-Net+ Certification: Second Edition is a hands-on course that helps prepare you for CompTIA's Core Technologies exam #IK0-001.

**Prerequisites:** Technical Introduction to the Internet. The following courses, or equivalent knowledge, are also recommended but not required: *A+ Certification* and *Network+ Certification*

In addition, you should have a working knowledge of the Windows 2000 Professional operating system, so that class time is spent on Internet topics, and not Windows 2000 Professional orientation.

**Description:** Course length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Identify the function of URLs and diagnose issues that affect Internet functionality.
- Explain the role of the software packages needed to support an Internet client.
- Design and maintain HTML-based World Wide Web pages and appreciate the power that programming and database access add to a Web site
- Identify the components of the Internet and troubleshoot problems clients and servers may have with Internet connectivity.
- Provide security for Web users, World Wide Web sites, and host computers.
- Define the basic issues a Web-based business must face and maintain a working knowledge of current ecommerce technology and concept.

## Network+ Certification

**Overview:** This course is designed to prepare students for the 2002 CompTIA's Network+ Exam N10-002. Earning the Network+ Certification means that students have the knowledge needed to use and maintain a wide range of network technologies. From this exam, students often move on to more advanced IT certifications, including Microsoft's MCSA and MCSE, CCNA and Novell's CNE.

**Prerequisites:** *Network+ Certification* is for the student with 18 to 24 months of professional computer support experience. It is assumed that you have a general working knowledge of personal computers, some network experience, and have taken the following courses or have equivalent experience: *Windows 98: Introduction, Windows 2000: Introduction*. The following courses are highly recommended: A+ Certification: Performance-Based Objectives

**Description:** Course length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Describe basic networking and identify different networking models.
- Describe the basics of data movement, physical media, and network connectivity devices.
- Use the OSI model and understand Ethernet, Token Ring, FDDI, and wireless networks.
- Understand data routing and common network protocols such as NetBEUI and TCP/IP.
- Discover a TCP/IP services.
- Understand older network protocols still used today, such as IPX/SPX, AppleTalk, Apple Open Transport, and IPv6.
- Examine the infrastructure of a local area network.
- Distinguish the different methods used to connect networks together through the public

carrier services.

- Understand the different methods of remote networking.
- Understand and implement relevant aspects of network security.
- Apply disaster recovery principles.
- Describe and employ advanced data storage techniques.
- Understand and implement network-troubleshooting procedures.
- Describe the basics of the network operating systems in use today.

## Security +

**Overview:** This certification is intended to Information Technology technical support professionals who want to acquire working knowledge in security. The CompTIA Security+ certification tests for security knowledge mastery of an individual with two years on-the-job networking experience, with emphasis on security. Security+ certification is recognized around the world as the benchmark for foundation-level security professionals. Incorporating a comprehensive range of security knowledge areas, Security+ was developed with input from industry, government, academia and front-line practitioners, so you can be assured of its relevance. All industries need a trained and effective IT workforce to combat hackers, attackers and security threats. Maintain the integrity of your organization's communications, infrastructure and operations.

**Prerequisites:** Individuals with two years on-the-job networking experience, and possess a thorough knowledge of TCP/IP. It is recommended that the Security+ exam candidate already hold a CompTIA Network+ or equivalent certification.

**Description:** Course Length: 40 hours. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, the following topics will have been covered:

- General Security Concepts
- Access Control
- Authentication

- Non-essential Services/Protocols
- Attacks
- Malicious Code
- Social Engineering
- Communication Security
- Remote Access
- E-mail Security
- Web Security
- File Transfer Services
- Wireless
- Infrastructure Security
- Devices
- Media Types
- Security Topologies
- Intrusion Detection
- Security Baselines
- OS/NOS Hardening
- Network Hardening
- Application hardening
- Cryptographic Basics
- Algorithms
- Public Key Infrastructure (PKI)
- Standards and Protocols
- Key Management/Certificate Life Cycle
- Operational/Organizational Security
- Physical Security
- Disaster Recovery
- Business Continuity
- Policy and Procedures
- Privilege Management
- Computer Forensics
- Risk Identification
- User Awareness Education
- Documentation



## Network Security Fundamentals

**Overview:** Network Security Fundamentals is designed to provide both Windows NT and Unix network administrators an awareness of security related issues and the essential skills they need to implement security in such networks. This course is the first course offered in Level 1 of the *Security Certified Program* and maps to Exam SC0-401.

**Prerequisites:** To ensure your success, we recommend you first take the following course or have equivalent knowledge: *CompTIA Network+*.

**Description:** Course length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Identify the basics of network security.
- Define the TCP/IP layered architectures and review advanced IP addressing protocols and commands.
- Describe and work with IP protocols and packets at various levels.
- Create router security using the functions of Access Control Lists.
- Secure Windows NT and 2000 computers and test security effectiveness.
- Secure Linux computers and test security effectiveness.
- Define the common Internet components and examine techniques used in Web hacking.
- Examine and work with the common techniques used to attack networks.
- Examine and work with the specific tools used to attack Windows 9x/NT/2000 and Linux.

## Network Defense and Countermeasures

**Overview:** *Network Defense and Countermeasures* is the second course of the first level of the Security Certified Program. It is focused on understanding the architecture for Network Defense. maps to Exam SC0-402.

**Prerequisites:** To ensure your success, we recommend you first take the following Element K course or have equivalent knowledge: *Network Security Fundamentals*

**Description:** Course length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Identify the basic components of a layered structure for Network Defense architecture, describe Access Control objectives and Auditing concepts
- Identify key concepts and technologies used in the design of firewall systems as well as methods of implementing firewalls in different scenarios.
- Implement and configure firewalls for three different operating systems and compare their functionality and at the same time the differences between the technologies.
- Describe Virtual Private Networks (VPN) and security issues related to it. You'll also take steps to implement a VPN solution built into Windows 2000
- Describe the key concepts of Intrusion Detection Systems. You'll be able to distinguish between Host-based and Network-based Intrusion Detection Systems.
- Implement and configure a network-based and a host-based IDS
- Describe core concepts of TCP/IP packet and signature analysis with the goal of intrusion detection. You will also examine the goals of the CVE project.
- Describe the concepts and issues related to Risk Analysis. You will see different methods of risk analysis, different standards, and different techniques to minimize risk.
- Implement a security policy for an organization. You will be introduced to different methods of policy creation and implementation, and you will create a policy document.

## PKI and Biometric Concepts & Planning

**Overview:** *PKI and Biometric Concepts and Planning* course is the first of two, which correspond to the first exam in the advanced security architect track.

Designed to test the skills of the more complex issues of network security, the SC0-501 exam will cover issues such as: Cryptography Fundamentals, Digital Signatures, Biometrics Fundamentals, PKI Fundamentals, PKI Standards, and Strong Authentication.

**Prerequisites:** *Network Defense and Countermeasures*

**Description:** Course length: 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to discuss:

- Cryptography Fundamentals
- Strong Authentication
- Digital Signatures
- PKI Standards
- Biometrics Fundamentals
- PKI Fundamentals

## PKI And Biometric Implementation

**Overview:** *PKI and Biometric Implementation* course is the second of two, which correspond to the first exam in the advanced security architect track. Designed to test the skills of the more complex issues of network security, the SC0-501 tests the skills of the more complex issues of network security, the exam will cover issues such as: Sign-On Solutions, File Encryption

Solutions, Certificate Server Deployment, PKI Solutions and Applications, Secure E-Mail Implementation, and Network Forensics.

**Prerequisites:** *PKI and Biometric Concepts & Planning*

**Description:** Course length: 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to discuss:

- Sign-On Solutions
- PKI Solutions and Applications
- Secure E-Mail Implementation
- Legal Issues of Network Security
- File Encryption Solutions
- Certificate Server Deployment
- Computer Forensics

## Microsoft Certified Technical Course Descriptions and Prerequisites

### Introduction to Programming with Microsoft Visual Basic 6 - Course No. 1587

**Overview:** This course provides an introduction to programming for students with little or no prior programming experience. Through this course, students will gain a strong, accessible, hands-on foundation in the language and database skills

needed to develop business applications.

**Prerequisites:** Ability to use a computer keyboard and a mouse, familiarity with the general operations of Microsoft Windows 95/Microsoft Windows NT Workstation desktop applications, such as open, save, copy, move, and delete files.

**Description:** Course length 4 days Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Understand the history and evolution of the personal computer (PC)
- Recognize the names and functions of the common PC peripherals and basic operating system concepts
- Define the terms pertaining to relational database design.
- Join multiple tables in a query while specifying search criteria and sorting records.
- Understand the purpose and role of variables, constants, and procedures in application programming.
- Control program execution with decision control and looping structures
- Create a simple database application.

## **Mastering Microsoft Visual Basic 6 Fundamentals – Course No. 1303**

**Overview:** This course teaches programmers the skills necessary to create Microsoft® Visual Basic® programming system desktop applications and satisfies the Visual Basic prerequisites for course 1013

**Prerequisites:** Working knowledge of programming concepts.

**Description:** Course length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon

successful completion of this course, students will be able to:

- Build custom, multiple-form applications.
- Incorporate dynamic menus, pop-up menus, status bars, and custom toolbars into applications.
- Implement form-level and field-level input validation.
- Debug applications using debugging tools provided in Visual Basic 6.
- Use standard controls, control arrays, and create controls dynamically.
- Execute centralized error handling in applications.
- Use the data control for database access.
- Implement drag and drop in Visual Basic-based applications.
- Use Microsoft ActiveX® controls in Visual Basic-based applications.
- Create setup programs to distribute applications.

## **Mastering Microsoft Visual Basic 6 Development- Course No. 1013**

**Overview:** This course teaches Microsoft® Visual Basic® programmers how to create database applications using components.

**Prerequisites:** This course assumes the student has a good working knowledge of the Microsoft Visual Basic programming system. Potential students should complete **Course 1303 Mastering Visual Basic 6.0 Fundamentals** or be able to accomplish the following tasks before taking this training: Create an application with multiple forms and add functionality for multiple events to the controls on those forms, Write a Function procedure and a Sub procedure, and invoke them

from Event procedures, Declare variables and use conditional statements, Describe the purpose and use of each of the controls in the Toolbox, Add a simple menu interface to an application, Retrieve and validate information from a user, Add a custom control to a project, Describe the relationship between properties, methods, and objects, Add run-time error handling to an application, Run the application and use debug mode within the Visual Basic environment, Create an EXE file from the project files, Design and use a relational database, Use SQL syntax to create database queries.

**Description:** Course length: 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Describe the visual data access tools that come with Visual Basic.
- Use the visual data access tools to create a connection to a data source and access data from the connection in an application.
- View the structure of a database using the Data Environment designer and the Data View window.
- Create database queries using Query Builder.
- Create data-bound forms using the Data Environment designer, Data Form Wizard, and the ADO Data control.
- Create a report using the Data Report designer.
- Use Visual Basic to create a simple application and an executable file for users.
- List the files that comprise a Visual Basic-based application.
- Use the Visual Basic debugging tools.
- Add run-time error handling to a procedure
- Explain the benefits of using class modules in an application.

- Use a class module to create a COM component within a Visual Basic project.
- Create a COM component that exposes properties, methods, and events.
- Create and use data-bound class modules.
- Describe the benefits of using ActiveX controls.
- Create an ActiveX control that exposes properties, methods, and events.
- Use control events to save and load persistent properties.
- Test and debug an ActiveX control.
- Create and enable property pages for an ActiveX control.
- Enable the data-binding capabilities of an ActiveX control.
- Create an ActiveX control that is a data source.
- Discuss SQL Server security implementations.
- Describe different cursor locations and when to use a specific cursor type.
- Use a stored procedure to execute a statement on a database.
- Handle referential integrity errors.
- Describe ways to enforce data integrity.
- List the main steps required to use an external COM component in a Visual Basic-based application.
- Create a Visual Basic-based client application that uses a COM component.
- Create a Visual Basic-based application that handles events from a COM component.
- Create a Visual Basic-based application that automates Internet Explorer.

- Compile a project with class modules into a COM component.
- Create an object model in a COM component.
- Debug and test a COM component.
- List the ways Visual Basic can enhance a Web site.
- Create applications that use the WebBrowser control.
- Explain what Active Documents are.
- Create an Active Document.
- Use the DHTML Page designer to create client-side code components.
- Use the Webclass designer to create server-side code components.
- Describe a variety of techniques for optimizing the performance of an application.
- Use the GetSetting and SaveSetting statements to save application-specific information to the registry.
- Use resource files.
- Create a Setup program using Package and Deployment Wizard.
- Package an ActiveX control for use on a Web site.
- List the ways Visual Basic can enhance a Web site.
- Create applications that use the WebBrowser control.
- Explain what Active Documents are.
- Create an Active Document.
- Use the DHTML Page designer to create client-side code components.

- Use the Webclass designer to create server-side code components.

## **Mastering Enterprise Development Using MS Visual Basic 6- Course No. 1016**

**Overview:** This course will teach Microsoft® Visual Basic® programmers, who currently build desktop applications and access corporate databases the basics of how to build three-tier client/server solutions.

**Prerequisites:** This course assumes that the student has intermediate programming competency with the Microsoft Visual Basic programming system, Before attending this course, students should complete:

Course 1303 Mastering Visual Basic 6.0 Fundamentals, Or must be able to demonstrate the following skills: Build and debug a simple Visual Basic application Invoke and control an Automation server, such as Microsoft Excel or Microsoft Word, from a Visual Basic application, Create code components using Visual Basic and invoke them from a client application, Use ActiveX Data Objects to open a database and work with record sets. The following courses are also helpful, and are required for proper preparation for related Microsoft Certified Professional Exams: Course 1013: Mastering Microsoft Visual Basic 6.0 Development, Course 1017: Mastering Web Site Development Using Microsoft Visual InterDev™ 6.0

**Description:** Course Length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Describe the architecture of an enter-prise solution using the Microsoft enterprise development strategy.
- Discuss and select the Microsoft development tools, products, and technologies that are most appropriate for solving a given business problem.
- Describe the attributes of the business problem that will be solved in this course, and in what way Microsoft technologies were used to build the technical solution.
- Use Application Performance Explorer (APE) to analyze the impact of choosing different

technologies for the sample application.

- Use the development environment of Visual Basic 6.0, Enterprise Edition, to accomplish basic tasks such as creating new projects.
- Explain the Solution Development Discipline (SDD) as a part of MSF, which is focused on the construction phase of the information technology life cycle.
- Describe the characteristics of each member's role in the MSF Team Model.
- List the Microsoft tools that facilitate team development.
- List and describe the major phases and deliverables in the MSF Process Model, and understand what part of the process this course focuses on in the construction of the Island Hopper sample application.
- Describe the use of user, business, and data services in the MSF Application Architecture Model.
- Differentiate conceptual, logical, and physical design of components in the Application Architecture Model, and understand the physical design of the Island Hopper sample application components.
- Use a class module to create an object within a Visual Basic project.
- Create a COM DLL that exposes methods.
- Create a client application that uses a COM DLL.
- Debug and test a COM DLL.
- Explain how MTS addresses these issues.
- Describe the MTS architecture.
- Create a package with MTS Explorer.
- Add an existing component to the MTS package.

- Set declarative security on a component or package.
- Configure a client computer to use an MTS component.
- Describe what a transaction is, and the benefits of the ACID properties.
- Describe how MTS performs a two-phase commit with a distributed transaction.
- Call the Context object's methods from a component to participate in transactions.
- Use MTS Explorer to specify transaction properties for a component.
- Use programmatic security in a component to authorize a caller's actions.
- Compare and contrast the Microsoft data access technologies available for use in enterprise development.
- Understand how ActiveX Data Objects can be used to access and update a data source.
- Write middle-tier components that implement business and data services using ActiveX Data Objects.
- Call a stored procedure from ActiveX Data Objects.
- Implement error handling in an ActiveX Data Object component.
- Explain the role of data integrity when implementing data services in an enterprise solution.
- Choose when to implement services in database or MTS objects.
- Implement business and data services by using stored procedures.
- Write a stored procedure that uses advanced SQL programming constructs, such as conditional branching and looping structures, and error checking.
- Write a stored procedure that can be used by other services, such as a client application written with Visual Basic, and that generates return codes and performs error checking.

- Debug a stored procedure.
- Describe the characteristics of SQL transactions and explain how they work with MTS transactions.
- Recall the architecture of an enterprise solution using the Microsoft enter-prise development strategy, and describe how the lab solution fits into this architecture.
- Describe two additional scenarios to the one presented in the class lab solution that would require a different approach or different technologies.
- Explain where to find more information on advanced issues, such as perfor-mance, scalability, or security.

## **Updating Support Skills from Microsoft Windows NT 4.0, Microsoft Windows 2000 - Course No. 1560**

**Overview:** The goal of this course is to provide Microsoft® Windows NT® 4.0 support professionals with the knowledge and skills necessary to support Microsoft Windows® 2000–based networks. This is a performance-based course; designed upon the job-related tasks a support professional must perform using new or modified features in the Windows 2000 operating system.

**Prerequisites:** Course 803, Administering Microsoft Windows NT 4.0, or equivalent skills and knowledge including creating and admin-istering user and group accounts; trouble-shooting problems that prevent users from logging on to a network; managing net-work resources; setting up and adminis-tering permissions for files and folders; taking ownership of folders; troubleshooting when users are unable to gain access to disk resources; setting up a printing environment; administering printers; troubleshooting printing problems; using auditing functions to generate and view security logs; monitoring network resources; backing up and restoring files and folders; and administering the Windows NT Server and Windows NT Workstation operating systems in real-world situations. Course 922, Supporting Microsoft Windows NT 4.0 Core Technologies, or

equivalent skills and knowledge including installing and configuring Windows NT; creating and implementing system policies; creating and managing partitions, file systems, and fault-tolerant volumes; supporting running applications under Windows NT; identifying network components and describing their function on a Windows NT–based computer; installing and configuring network transport protocols; installing and configuring network services on Windows NT Server; implementing remote access service (RAS); installing client software; implementing and troubleshooting directory replication; recognizing problems related to the boot process; and determining the appropriate action to take for common problems. A thorough understanding of DHCP, WINS, and Internet Protocol (IP) sub netting and routing. Experience supporting networks and end users.

**Description:** Course Length Five Days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Prepare for an installation of Windows 2000.
- Install Windows 2000 from a compact disc.
- Describe how to install Windows 2000 over a network.
- Describe how to automate installations of Windows 2000 by using the Windows 2000 Setup Manager Wizard.
- Describe how to automate installations of Windows 2000 by using disk duplication.
- Describe how to deploy Windows 2000 by using remote installation.
- Troubleshoot setup failures and recommend likely solutions.
- Install the DNS Server service.
- Configure zones in Windows 2000.
- Configure zone transfers.

- Configure Active Directory integrated zones.
- Configure zones for dynamic updates.
- Test the DNS Server service.
- Students will be able to:
  - Identify the operating systems that are included in the Microsoft Windows 2000 platform.
  - Identify the differences between Microsoft Windows NT Workstation version 4.0 and Microsoft Windows 2000 Professional.
  - Identify the differences between Microsoft Windows NT Server 4.0 and Microsoft Windows 2000 Server.
  - Identify key features in Microsoft Windows 2000 Advanced Server.
  - Identify key benefits of Microsoft Windows 2000 Datacenter Server.
  - Describe the role of Active Directory in Windows 2000.
  - Describe the logical structure of Active Directory.
  - Describe the physical structure of Active Directory.
  - Describe the roles of global catalog servers and operations masters in Active Directory.
  - Install Active Directory.
  - Describe the physical structure of Active Directory, including sites, site links, subnets, connection and server objects, replication within a site and between sites, and replication protocols.
  - Modify the physical structure by creating sites, subnets, site links, site link bridges, connection objects, and global catalog servers, and by moving server objects between sites.
  - Manage disk quotas on NTFS volumes.

- Use EFS for file encryption.
- Defragment a hard disk
- Explain the capabilities and structure of Group Policy, including Group Policy objects (GPOs), Group Policy containers (GPCs), and Group Policy templates (GPTs).
- Apply Group Policy by creating a GPO, managing the access permissions of GPOs, and managing the inheritance of GPOs through the structure of the Active Directory directory service.
- Configure Group Policy settings for administrative templates, scripts, security, and folder redirection.
- Explain the guidelines for implementing Group Policy.
- Describe the new protocols that Windows 2000 supports.
- Configure outbound connections in Windows 2000.
- Configure inbound connections in Windows 2000.
- Explain remote access policy and profile concepts.
- Describe the process of remote access policy evaluation.
- Create and configure a remote access policy and profile.
- Students will be able to:
- Summarize the disaster-protection features in Windows 2000.
- Use Windows 2000 fault-tolerant volumes.
- Explain Windows 2000 advanced startup options.
- Explain how to use the Windows 2000 Recovery Console.

- Use the backup utility in Windows 2000.
- Students will be able to:
- Plan a network upgrade to Windows 2000.
- Establish the root domain for the Windows 2000 Active Directory service.
- Upgrade domain controllers to Windows 2000.
- Upgrade and promote member servers to Windows 2000.
- Upgrade Windows client operating systems to Windows 2000.

## **Implementing Microsoft Metadirectory Services 2.2 – Course No. 2062**

**Overview:** The goal of this course is to provide students with the knowledge and skills necessary to install, configure, design, and deploy Microsoft Metadirectory Services (MMS) version 2.2. This course is intended for Information Technology (IT) professionals who plan to design and implement MMS to manage identity data that is maintained on multiple and diverse systems throughout an organization.

**Prerequisites:** Successful completion of course 1560B, Updating Support Skills from Microsoft Windows NT® 4.0 to Microsoft Windows 2000, or course 2154, Implementing and Administering Microsoft Windows® 2000 Directory Services, or equivalent skills and knowledge. The equivalent skills and knowledge that a student should have before taking this course includes: Understanding the concepts of networking Transmission Control Protocol/Internet Protocol (TCP/IP). Understanding the concepts of Lightweight Directory Access Protocol (LDAP) distinguished names, and relative distinguished names. Understanding the logon process and security in Windows 2000. Installing, configuring, and troubleshooting the Domain Name System (DNS). Identifying the concepts of

*Active Directory and its logical and physical structures. Understanding the concepts of sites and subnet objects, and schema masters. Understanding how Windows 2000 controls access to file system and directory service objects, the concepts of the Read and Modify permissions, and permission inheritance.*

**Description:** Course length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Describe the purpose, function, and components of MMS.
- Install and configure the server and client components of MMS, and explore the results of an MMS installation.
- Configure a management agent to manage entries in the metaverse namespace, the connector namespace, and the connected directories.
- Manage attribute values by establishing join criteria and implementing join inclusion rules, and by using attribute flow rules.
- Restructure data between a connected directory and the metadirectory by modifying the management agent parsing and construction templates.
- Perform advanced management agent configuration.
- Configure management agents, joins, attribute flow rules, and templates to perform an MMS implementation involving three connected directories.
- Automate the creation and deletion of user accounts in each connected directory throughout an enterprise by using the Together Administration Management Agent (TAMA).
- Manage enterprise data by using TAMA and the Active Directory™ directory service management agent to synchronize data between multiple Active Directory forests.
- Administer the metadirectory by securing access to metadirectory data, managing shared attributes, and distributing MMS Compass formsets.
- Maintain and optimize MMS.

- Troubleshoot MMS.
- Develop a project plan that outlines the functional requirements for a metadirectory.
- Design and develop a metadirectory deployment plan based on the management and security requirements of an organization.
- Deploy a metadirectory plan based on a business scenario.

## **Designing a Microsoft Windows 2000 Directory Services Infrastructure - Course No. 1561**

**Overview:** This course provides students with the knowledge and skills necessary to plan and implement Microsoft® Windows® 2000 Directory Services in an enterprise environment.

**Prerequisites:** Course 1560, Upgrading Support Skills from Microsoft Windows NT 4.0 to Microsoft Windows 2000, or equivalent knowledge.

**Description:** Course length 3 Days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

Describe the function and business benefits of Active Directory in an enterprise network.

Describe the process of gathering and documenting information from an organization that will impact the design of an Active Directory structure.

- Identify the architectural elements of Active Directory and describe how these elements are used to design an Active Directory structure.
- Determine the directory naming needs of an organization.
- Plan for directory-integrated DNS to reduce overall network traffic.
- Select appropriate domain names for Active Directory.

- Design a DNS naming strategy for Active Directory.
- Identify the administrative needs of an organization that impact an Active Directory design.
- Characterize the type of Information Technology (IT) organizational support as it impacts the design of an Active Directory structure.
- Plan for hierarchical design of Active Directory structure to support different IT organizational types.
- Develop a strategy for delegating administrative authority.
- Identify business needs that impact a domain design.
- Design the initial Active Directory domain, and explain the importance of the initial root domain.
- Develop a security group strategy.
- Develop a hierarchical OU structure within a domain.
- Identify criteria for determining whether a single or multiple domain structure is necessary to meet business needs.
- Describe the trust relationships inherent in multiple domain structures.
- Plan a multiple-domain tree.
- Plan a multiple-tree forest.
- Plan multiple forests.
- Describe the purpose of sites and their role in Active Directory replication.
- Identify organizational needs that require schema modification.
- Describe schema components and fundamentals of schema modification.

- Describe how schema modification impacts Active Directory and network performance.
- Design policies for governing schema modifications.
- Identify administrative needs that can be addressed through Group Policy.
- Determine the appropriate site, domain, or organizational unit level at which to apply Group Policy.
- Design a Group Policy plan based on the administrative needs of an organization and design an Active Directory
- Form a team to conduct an organizational analysis to determine business and administrative needs that impact the design of an Active Directory structure.
- Design an Active Directory structure that satisfies the business and administrative needs of an organization.
- Complete the design process by creating a functional specification that establishes an agreement between the architect planning team and the organization. © 2000 Microsoft Corporation. All rights reserved.

## **Designing a Microsoft Windows 2000 Migration Strategy- Course No. 2010**

**Overview:** This course provides students with the knowledge and skills necessary to select and design a strategy to migrate from a Microsoft® Windows® NT Server 4.0 directory services infrastructure to a Microsoft Windows 2000 Active Directory™ directory service infrastructure by describing the planning processes and implications involved.

**Prerequisites:** This course assumes prior completion of a directory service based on Active Directory technology. Active Directory services define the desired infrastructure of an enterprise network and are key to determining which migration strategy to choose. This course requires that students meet the

following: Successful completion of either: Course 1560, *Upgrading Support Skills from Microsoft Windows NT 4.0 to Microsoft Windows 2000* OR Course 2154, *Implementing and Administering Windows 2000 Directory Services*. Successful completion of course 1561, *Designing a Microsoft Windows 2000 Directory Services Infrastructure*. Working knowledge of Active Directory planning and design. Experience evaluating forest and site designs for the purposes of upgrading

**Description:** Course length 2 days lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Choose a migration path to Windows 2000 Active Directory.
- Develop an upgrade strategy.
- Ensure continued productivity during a domain upgrade or a restructure by managing and mitigating risks of a production environment.
- Develop a domain restructure strategy.
- Plan to deploy a migration strategy

## **Designing a Microsoft Windows 2000 Networking Services Infrastructure – Course No. 1562**

**Overview:** This course is intended for network architects who will plan and design a network infrastructure built around Windows 2000 in an enterprise environment. It is also appropriate for experienced Microsoft Certified Systems Engineers who want to move into the enterprise architect environment. This course provides students with the knowledge and skills necessary to develop a Microsoft® Windows® 2000 networking services solution for enterprise networks.

**Prerequisites:** Course 1560, *Upgrading Support Skills from Microsoft Windows NT® 4.0 to*

Microsoft Windows 2000, or equivalent knowledge. Working knowledge of IP routing and IP routing protocols (including RIP and OSPF)

**Description:** Course length: Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Provide an Internet Protocol (IP) networking infrastructure (TCP/IP, DHCP, DNS)
- Support remote users (dial-up remote access, RADIUS, and Connection Manager)
- Provide IP routing (dynamic routing protocols, multicasting, and demand-dial routing)
- Provide secure communications (VPN and IPSec)
- Manage access to the Internet (Connection Sharing and Proxy).

## **Basic Administration of Microsoft Windows 2000 – Course No. 2028**

**Overview:** This course provides students with the knowledge and skills necessary to perform administration tasks in a single-domain Microsoft Windows 2000 network. This course is suitable for people with no prior experience in system administration.

**Prerequisites:** Proficiency using the Windows interface to locate, create, and manipulate folders and files, and to configure the desktop environment. General knowledge of basic computer hardware components including memory, hard disks, and central processing units. General knowledge of basic networking concepts; including the network operating system, server-client relationship, and local area network.

**Description:** Course length 3 Days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Add user accounts and grant access permissions to groups.

- Administer users and groups.
- Administer file resources.
- Administer printer resources.
- Manage data storage.
- Monitor access to resources.
- Audit access to resources.
- Back up and restore files and folders

## **Designing a Secure Microsoft Windows 2000 Network- Course No. 2150**

**Overview:** Course length 5 Days. This course provides students with the knowledge and skills necessary to design a security framework for small, medium, and enterprise networks using Microsoft® Windows® 2000 technologies. This course contains four units that describe security in specific areas of the network: Unit 1, Providing Secure Access to Local Network Users, Unit 2, Providing Secure Access to Remote Users and Remote Offices, Unit 3, Providing Secure Access Between Private and Public Networks, Unit 4, Providing Secure Access to Partners

**Prerequisites:** This course requires that students meet the following Prerequisites: Working knowledge of Windows 2000 Directory Services, Completion of course 1560, Upgrading Support Skills from Microsoft Windows NT 4.0 to Microsoft Windows 2000 OR Completion of course 2154, Implementing and Administering Windows 2000 Directory Services or equivalent knowledge.

# Microsoft Windows 2000 Network and Operating System Essentials - Course No. 2151

**Overview:** The goal of this course is to provide individuals who are new to Microsoft®

Windows® 2000 with the knowledge necessary to understand and identify the tasks involved in supporting Windows 2000 networks. This is an introductory course designed to provide an overview of networking concepts and how they are implemented in Windows 2000.

**Prerequisites:** Before attending this course, students must be able to demonstrate the following skills

Proficiency using the Windows interface to locate, create, and manipulate folders and files and to configure the desktop environment. General knowledge of computer hardware components, including memory, hard disks, and CPUs. General knowledge of networking concepts, including network operating system, server-client relationship, and local area network (LAN)

**Description:** Course length 3 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Describe the principal features of Windows 2000 and the basics of networking with Windows 2000
- Describe the types of user accounts and the principal security features of a Windows 2000 network
- Identify the tools used to perform various administrative tasks
- Describe the features of the common protocols used in a Windows 2000 network
- Describe the fundamentals of TCP/IP
  - Including name resolution, routing, and IP addressing—classful versus Classless Inter-Domain Routing (CIDR)
- Describe the network communication models used in a Windows 2000 network
- Differentiate between the various types of network architectures

- Describe the common physical components used for network communication
- Describe the concepts and protocols for remote access communication
- Describe the client and server technologies used in accessing Web services.

## **Implementing Microsoft Windows 2000 Professional and Server - Course No. 2152**

**Overview:** This course provides students with the knowledge and skills necessary to install and configure Microsoft Windows 2000 Professional on stand-alone and client computers that are part of a workgroup or domain. In addition, this course provides the skills and knowledge necessary to install and configure Windows 2000 Server to create file, print, Web, and Terminal servers. It also provides students with the prerequisite knowledge and skills required for course 2153, Implementing a Microsoft Windows 2000 Network Infrastructure.

**Prerequisites:** Successful completion of course 2151, Microsoft Windows 2000 Network and Operating System Essentials, or equivalent knowledge. This includes the ability to: Describe the principal features of the Windows 2000 operating system and the basics of networking in a Windows 2000 environment, Identify the tools used to perform common administrative tasks, Describe the types of user accounts and the principal security features of a Windows 2000 environment, Describe the features of the common network protocols used in Windows 2000, Describe the fundamentals of Transmission Control Protocol/Internet Protocol (TCP/IP), Describe the communication process in a Windows 2000 network, Differentiate between the various types of network architectures, Describe the common hardware components used in network communication., Describe the requirements for Internet access and Web security.

**Description:** Course length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Install or upgrade to Windows 2000
- Configure the Windows 2000 environment
- Connect clients running Windows 2000 to networks
- Create and manage user accounts
- Manage access to resources by using groups
- Manage data by using the NTFS file system
- Provide network access to file resources
- Monitor and optimize performance in Windows 2000
- Implement security in Windows 2000
- Configure printing; configure Windows 2000 for mobile computing
- Configure and manage disks
- Implement disaster protection
- Install and configure Terminal Services
- Implement Windows 2000 clients
- Implement Windows 2000 servers

## **Implementing a Microsoft Windows 2000, Network Infrastructure - Course No. 2153**

**Overview:** This course is for new-to-product support professionals who will be

responsible for installing, configuring, managing and supporting a network infrastructure that uses the Microsoft® Windows® 2000 Server products. It also provides students with the prerequisite knowledge and skills required for course 2154, Implementing and Adminis-tering Microsoft Windows 2000 Directory Services.

**Prerequisites:** This course requires successful completion of course 2152, Supporting Windows 2000 Professional and Server Or Equivalent skills and knowledge, including the ability to: Install or upgrade to Microsoft Windows 2000, Configure the Windows 2000 environment, Provide access to resources by configuring use accounts, Manage access to resources by using groups, Configure disks and partitions, Manage data by configuring New Technology file system (NTFS), Control access to resources by sharing files and folders, Configure printing, Configure connectivity for network clients, Optimize and maintain Windows 2000, Secure the Windows 2000 environment, Manage software, Implement disaster protection, Configure Windows 2000 for mobile computing, Install and configure Terminal Services, Implement Windows 2000 in specific network roles

**Description:** Course length 5 Days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Configure the DHCP Server service
- Configure the DNS Server service
- Configure WINS
- Configure network security protocols
- Configure the Windows 2000 Routing and Remote Access
- Manage and troubleshoot Routing and Remote Access configuration
- Integrate Remote Authentication Dial-In User Service (RADIUS) with Routing and Remote Access

- Configure connectivity between network segments
- Configure Internet access for a network
- Configure a Web server
- Configure a Remote Installation Services (RIS) server
- Integrate network services
- Manage the operation of a Windows 2000 network from a central location
- Identify and resolve network connectivity problems by using Windows 2000 troubleshooting tools and utilities
- Enable network connectivity among NetWare, Macintosh, and UNIX networks.

## **Implementing and Administering Microsoft Windows 2000, Directory Services - Course No. 2154**

**Overview:** This course is designed to provide students with the knowledge and skills necessary to install, configure, and administer Microsoft® Windows® 2000 Active Directory™ directory services. The course also focuses on implementing Group Policy and understanding the Group Policy tasks required to centrally manage users and computers.

**Prerequisites:** Course 2152, Supporting Windows 2000 Professional and Server, or equivalent knowledge and skills. This includes installing Windows 2000, using Windows 2000 administration tools, configuring hard disks and partitions, creating and administering printers, and controlling access to file resources by using NTFS and shared folders. Course 2153, implementing a Network Infrastructure using Microsoft Windows 2000 or equivalent knowledge and skills. This includes installing and configuring TCP/IP, DNS, and Certificate services.

**Description:** Course length 5 Days. Lesson objectives help students become

comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Describe the logical and physical components of Active Directory.
- Configure the DNS Server service to support Active Directory.
- Create a Windows 2000 domain by installing Active Directory on a computer running Windows 2000 Server.
- Set up and administer domain user accounts and groups.
- Publish resources—including shared folders, printers and services—in Active Directory.
- Delegate administrative control of Active Directory objects to decentralize administration in a Windows 2000 network; implement Group Policy to centrally manage users and computers.
- Use Group Policy to configure and manage the user desktop environment; use Group Policy to deploy and manage software.
- Use Group Policy to implement and manage security settings.
- Create and manage Active Directory trees and forests.
- Manage Active Directory replication within a site and between sites.
- Manage operations masters; manage and restore the Active Directory database.
- Implement and administer Active Directory based on a directory services design provided by an enterprise architect.

## **Managing a MS Windows 2000 Network Environment – Course No. 2126**

**Overview:** The goal of this five-day, instructor-led course is to provide the

knowledge required by system administrators, network administrators, and IT professionals who implement, manage, and troubleshoot existing network and server environments based on the Microsoft® Windows® 2000 operating system. These skills are generally required in medium to large organizations that maintain 200 to 26,000 user desktops and servers, spanning two to 100 physical locations by using local area networks (LANs) and the Internet or intranets. Additionally, this course provides the skills and knowledge that Microsoft Certified Systems Administrator (MCSA) certification candidates need to prepare for Microsoft Certified Professional Exam 70-218: *Managing a Microsoft Windows 2000 Network Environment*. This course is intended for system administrators, network administrators, and IT Professionals who focus on performing desktop and server installation and configuration tasks, and network and operating system management tasks in a Windows environment. The technical support specialist is a secondary audience for this course, because the course deals with troubleshooting tasks, hardware and software installations, configurations, upgrades, and some network and system operations tasks.

**Prerequisites:** Before attending this course, students must have completed: Course 2151: Microsoft Windows 2000 Network and Operating System Essentials & Course 2152: Implementing Microsoft Windows 2000 Professional and Server.

**Description:** Course length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Publish and maintain printers and shared folders.
- Delegate administrative control of an organizational unit.
- Install and configure the Domain Name System (DNS) service.
- Identify Active Directory® directory service replication latency issues and resolves conflicts that result from replication.
- Implement Group Policy to centrally manage users and computers.
- Manage users' desktops and software by using Group Policy.

- Implement security settings and account policies by using Group Policy.
- Implement and manage Web-based services in an intranet.
- Implement Remote Access Service (RAS) and manage remote access by using remote access policies.
- Implement and manage the Dynamic Host Configuration Protocol (DHCP) service.
- Implement name resolution for client computers by using DNS and Windows Internet Name Service (WINS).
- Troubleshoot client computer startup and user logon problems.

## **Deploying and Managing Microsoft Internet Security and Acceleration (ISA) Server 2000 - Course No. 2159**

**Overview:** The goal of this course is to provide Information Technology (IT) professionals with the knowledge and skills to deploy and manage ISA Server 2000 as a firewall and as a caching server. This course is intended for IT professionals and is not intended for network architects. Three of the major job roles performed by IT professionals to be addressed by this course include Web administrators, network administrators, and security administrators.

**Prerequisites:** Course 2152, Implementing Microsoft Windows 2000 Professional and Server, or equivalent knowledge of Windows 2000 Professional and Server, Course 2153, Implementing a Microsoft Windows 2000 Network Infrastructure, or equivalent knowledge of Windows 2000 networking.

**Description:** Course length 2 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Explain the role of ISA Server in an enterprise network.

- Install ISA Server and configure client computers.
- Maintain an ISA Server array.
- Configure access policies to enable secure Internet access for client computers.
- Configure ISA Server as a Web cache server.
- Configure access to internal Web and application servers.
- Configure VPN access to an organization's network.
- Configure ISA Server as a firewall.
- Configure packet filters for controlling network traffic.
- Monitor ISA Server activities by using alerts, logging, reporting, and real-time monitoring.
- Install and configure ISA Server in an enterprise environment.

## **Designing and Populating a Data Warehouse with Microsoft SQL Server 2000 - Course No. 2092**

**Overview:** This course provides students with the knowledge and skills necessary to design a data warehouse and to populate data marts by using Data Transformation Services (DTS) in Microsoft SQL Server 2000.

**Prerequisites:** Familiarity with Microsoft SQL Server version 7.0 or Microsoft SQL Server 2000.

Course 832, System Administration for Microsoft SQL Server 7.0, and course 833, implementing a Database on Microsoft SQL Server 7.0 or the equivalent Microsoft SQL Server 2000 courses, knowledge of Transact-SQL usage in the development of online transaction processing (OLTP) systems, basic understanding of programming principles (especially experience with a scripting

language such as Microsoft Visual Basic® Scripting Edition or Microsoft Jscript® development software) and understanding of basic database design, administration, and implementation concepts.

**Description:** Course 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Understand data warehousing concepts and applications.
- Build relational data marts by using star schemas.
- Develop a data warehouse data load strategy.
- Use the DTS Import/Export Wizard.
- Understand DTS package components.
- Use DTS to copy and manage data.
- Design insert based transformation by using the Transform Data Task.
- Implement a Data Driven Query solution.
- Execute packages and design package security.
- Understand the basics of the DTS Object Model.
- Modify DTS package properties.
- Implement DTS in specific real-world data load scenarios.
- Apply tuning techniques to DTS data loads.

**Gathering and Analyzing Business Requirements – Course No. 1585**

**Overview:** This workshop teaches participants to gather, analyze, and present business processes and requirements. Participants will learn how to develop and communicate a vision document that captures the business requirements and solution goals by using the appropriate Microsoft® Solutions Framework (MSF) models and processes. **Prerequisites:** This course assumes that the student has the following skills, At least six months of experience in a business environment, a general understanding of a software life cycle model, A general knowledge of Microsoft technologies.

**Prerequisites:** This course assumes that the student has the following skills:

- At least six months of experience in a business environment
- A general understanding of a software life cycle model
- A general knowledge of Microsoft technologies

**Description:** Course length 3 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Gather information about business processes, challenges, and vision
- Determine business and user requirements
- Model existing business processes
- Analyze business requirements in the context of the business environment
- Build a vision document.

**Designing Business Solutions - Course No. 1608**

**Overview:** This five-day workshop teaches participants to use the appropriate Microsoft® Solutions Framework (MSF) models and processes to create conceptual, logical, and physical designs for a business solution. Participants will also learn how to select suitable technologies and architectures for their solution, based on trade-off analysis.

**Prerequisites:** Before attending this course, students must have: Six months experience as part of a software development team, general understanding of a software development life cycle general knowledge of Microsoft technologies, general understanding of the process of gathering and analyzing business requirements.

**Recommended courses:** Course 1585, Gathering and Analyzing Business Requirements or equivalent experience and knowledge.

**Description:** Course length 5. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Use the MSF Process Model and MSF Application Model to develop conceptual, logical, and physical designs of a business solution
- Select solution technologies and architecture based on a tradeoff analysis
- Address the issues involved in designing a user interface
- Produce a baseline functional specification that can be used to develop a business solution.

## **Designing Data Services and Data Models - Course No. 1609**

**Overview:** This workshop teaches students to analyze business requirements to determine data storage and data access requirements. Participants will learn to design data models and the data layer of a Microsoft® Windows DNA architecture, and select the appropriate Microsoft technologies.

**Prerequisites:** Before attending this course, students must be able to demonstrate

the following: A general understanding of the software development life cycle, A general understanding of relational database management systems, A general understanding of the process of gathering and analyzing business requirements.

**Recommended Courses:** Course 1585, Gathering and Analyzing Business Requirements

**Description:** Course length 3 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Derive conceptual data requirements from business requirements.
- Develop entity/ relationship (ER) models.
- Normalize a logical data model.
- Create an optimized physical data model.
- Select the appropriate type and location of data integrity requirements to implement, given a set of constraints.
- Select appropriate data access and data storage technologies for a solution.

## **Mastering Distributed Application Design and Development Using Microsoft Visual Studio 6.0 - Course No. 1298**

**Overview:** This course introduces developers to the opportunities and challenges of creating enterprise-level applications. Students will see how creating such flexible and scalable applications can be challenging, but they will learn how to address these challenges by employing appropriate design, tools, and technology. Through explanations and media, students will learn about key functionality provided by several development tools and technologies. Through demonstrations and animations, they'll see how to use the tools. In controlled hands-on exercises, they will use the tools in the Microsoft® Visual Studio® development system and be guided through the creation of a sample application. Prerequisites: This

course assumes that the student has a minimum of beginning/intermediate programming skills as demonstrated by the following competencies: Understands basic programming terms and concepts. Is familiar with programming tools (any vendor) for the Microsoft Windows® operating system or similar graphical programming environment. Has built and debugged single-user desktop applications. Is interested in distributed application design, development, and deployment techniques.

**Description:** Course length 3 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Build a simple distributed application
- Explain Microsoft's recommended architecture for enterprise applications
- Implement practical examples of the core elements needed to develop distributed applications
- Reference additional sources of information and training.

## **Developing Secure Web Applications- Course No. 2300**

**Overview:** This three-day instructor-led course provides students with the knowledge and skills that are needed to build Web applications by using secure coding techniques. Students will learn how to identify Web application security vulnerabilities and understand the trade-offs between functionality and performance when choosing the appropriate security mechanisms for their Web applications. Throughout this course, students will get hands-on experience in creating secure Web applications. This course is intended for students who are responsible for the design and development of Web applications. These students typically have three to five years of experience in developing or designing distributed Web applications. Actual job role titles vary throughout the technology industry, and they may include, but are not limited to:

**Web Developer:** The Web developer is responsible for developing the logic, coding, testing, and debugging of Web applications and Web application software.

**Solutions Architect:** The Solutions Architect is responsible for the design of the technical architecture of Web applications and Web-based software applications

**Prerequisites:** Before attending this course, students must have:

- Familiarity with n-tier application architecture.
- Experience in developing or designing distributed Web applications.
- Experience with one or both of the following programming languages:
- Microsoft C#
- Microsoft Visual Basic® .NET
- Experience in writing server-side and client-side scripts by using one or both of the following scripting languages:

§ Active Server Pages (ASP)

§ Microsoft ASP.NET

- Familiarity with all of the following Microsoft products and technologies is recommended:

§ SQL Server 2000

§ Microsoft Internet Information Services (IIS)

**Description:** Course length 3 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Define the basic principals of, and motivations for, Web security.
- Perform a threat analysis of Web-accessible assets.

- Use knowledge of authentication, Security Identifiers (SIDs), Access Control Lists (ACLs), impersonation, and the concept of running with least privilege to ensure access to only those system resources that are necessary to accomplish normal request processing.
- Protect file system data by using the features in Microsoft® Windows® 2000.
- Use the Microsoft SQL Server™ Security model and Microsoft ADO.NET to protect a Web application against SQL Server injection attacks.
- Use one of the **Crypto Service** classes of the **System.Security.Cryptography** namespace to transform a block of data into cyphertext.
- Protect the portion of a Web application that requires private communications by using Secure Sockets Layer (SSL).
- Use general security coding best practices to ensure a secure Web application.
- Use the Microsoft .NET Framework to build secure Web applications.
- Employ a structured approach to testing for Web application security.
- Use a systematic approach and knowledge of security best practices to secure an existing Web application.

## **Programming with Microsoft ADO.NET- Course No. 2389**

**Overview:** This course will teach developers to build data-centric applications and Web services with Microsoft ADO.NET, Microsoft SQL Server™ 2000, and the Microsoft .NET Framework.

This course is designed for the professional platform developer who is responsible for designing and building data-centric, distributed applications for his or her organization. It is designed for developers who have component and Web application development skills, and who have previously built solutions by using Microsoft Visual Studio®.

Typically, these individuals will have the following skills: Experience with a .NET language such as Microsoft Visual Basic® .NET, Microsoft Visual C#™, or Microsoft Visual C++®; an understanding of object-oriented concepts and terminology; experience developing distributed applications; and experience developing Web-based applications hosted on Internet Information Server.

**Prerequisites:** The course assumes that students have the following skills:

- Understanding of relational database concepts: table, row, column, primary keys, foreign keys, constraints, and views
- Data query and modification experience, including experience with SELECT, INSERT, UPDATE, and DELETE commands
- Exposure to XML documents, style sheets, and schemas
- Experience with Visual Basic .NET, Visual Basic for Applications, or previous versions of Visual Basic
- Experience building user interfaces, including Web applications or Microsoft Windows® applications

**Description:** Course length 3 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Describe data-centric applications, ADO.NET architecture, and ADO.NET and XML.
- Connect to SQL Server and other data sources.
- Perform connected database operations including executing SELECT commands, database definition commands, dynamic SQL commands, and commands that return data from a SQL Server database in XML.
- Build a DataSet schema, populate it with data, and modify the data programmatically.
- Build a DataSet from an existing data source.

- Use XML techniques while working with DataSets, including mapping tables and columns, creating XSD schemas, building strongly typed DataSets, and interacting with XMLDataDocuments.
- Build a Web service that uses ADO.NET to query and update a data source.
- Troubleshoot errors within an ADO.NET application.

## **Introduction to Visual Basic .NET Programming with Microsoft .NET– Course No. 2559**

**Overview:** 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. This course is intended for both novice and experienced programmers who have a minimum of three months programming experience and have basic Microsoft Windows navigation skills.

**Prerequisites:** Before attending this course, students must have:

- Windows navigation skills.
- Experience (at least 3 months) with developing applications in either a graphical or non-graphical environment.

**And**

- Completion of Microsoft MSDN® Training, Course 1587: Introduction to Programming with Microsoft Visual Basic 6.0.

**Or**

- Understanding of the basics of structured programming, including concepts such as flow

control, variables and parameters, and function calls.

**Description:** Course length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Create a simple Visual Basic .NET-based application based on the Windows Application template.
- Use forms and controls to create a user interface.
- Create and use variables and arrays.
- Create and use **Sub**, **Function**, and **Property** procedures.
- Implement decision structures and loops by using conditional expressions.
- Resolve syntax, run-time, and logic errors by using the debugger and structured exception handling.
- Validate user input for fields, controls, and forms.
- Enhance the user interface by adding menus, status bars, and toolbars.
- Create a simple Visual Basic .NET-based Web Forms application that uses an XML Web Service.
- Apply object-oriented programming techniques to create classes, add methods, and add properties.
- Access and manipulate data in a Microsoft Access database by using ADO.NET.
- Build, package, and deploy an application.

**Microsoft Visual Basic NET for Visual Basic Developers – Course No. 2373**

**Overview:** The goal of this course is to provide Microsoft® Visual Basic® developers with the knowledge and skills needed to develop Microsoft, NET-based applications by using Visual Basic .NET version 7.0. Visual Basic .NET is a significant upgrade to Visual Basic and incorporates many new features and framework goals of the .NET architecture. These changes will allow Visual Basic developers to create enterprise applications for the .NET Platform and to create more traditional Visual Basic applications that can take advantage of the enhancements to the language. This course is intended primarily for developers who use Visual Basic 4.0 or later as their primary language, who use Microsoft technologies such as Microsoft ActiveX® Data Objects (ADO) and Active Server Pages (ASP) to develop applications, and who plan to use Visual Basic .NET for future application development.

**Prerequisites:** Before attending this course, students must meet the following prerequisites: Experience developing applications with Visual Basic 4.0 or later, Successful completion of Course 1013, Mastering Microsoft Visual Basic 6 Development or equivalent knowledge or Successful completion of Course 1016, Mastering Enterprise Development Using Microsoft Visual Basic 6 or equivalent knowledge, Familiarity with basic concepts of object-oriented programming, Familiarity with Extensible Markup Language (XML) concepts, Familiarity with Microsoft's .NET strategy as described on Microsoft's .NET Web site: <http://www.microsoft.com/net>.

**Description:** Course length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- List the major elements of the .NET Framework and describe some of the major enhancements to the new version of Visual Basic.
- Describe the basic structure of a Visual Basic .NET project and use the main features of the integrated development environment (IDE).
- Use the new language features and syntax in Visual Basic .NET.

- Explain the basic concepts and terminology of object-oriented design specifically for Visual Basic .NET.
- Explain and use the basic concepts and terminology of object-oriented programming in Visual Basic .NET.
- Create applications by using Microsoft Windows® Forms.
- Create Internet applications that use Web Forms and Web Services.
- Create applications that use ADO .NET.
- Create components in Visual Basic .NET.
- Set up and deploy various types of Visual Basic .NET–based applications.
- Prepare existing Visual Basic–based applications for upgrade to Visual Basic .NET.

## **Microsoft Security Clinic - Course No. 2604**

**Overview:** The goal of this three-hour clinic is to provide attendees with a general awareness of the common types of security threats and offer practical solutions to protect their organizations. Attendees will learn about recommended security policies, practices, and procedures to establish a long-term approach to proactively manage systems that are exposed to the Internet. Attendees will see demonstrations of security monitoring and evaluation tools, which they can take back to their organizations. This course is intended IT decision makers and systems engineers and who are responsible for establishing security policies and procedures for an organization. It is also intended for Web administrators, and Internet and intranet systems engineers who are responsible for managing the day-to-day operations of Web sites.

**Prerequisites:** Attendees should have familiarity with Windows 2000 security features including

security templates , group policy & account management .

**Description:** Course length: 3 hours. Lesson objectives help students become comfortable with the clinic, and also provide a means to evaluate learning. After attending the clinic, attendees will have a general awareness of the common types of security attacks and knowledge of practical solutions to protect organizations from internal and external based threats. Clinic presentation

Topics include:

- Identifying security risks
- Performing a risk assessment
- Planning a security strategy
- Securing the perimeter network
- Securing servers, workstations, and services
- Responding to a security incident
- Maintaining network security

## **Building Solutions for Microsoft Windows 2000 with Visual Basic - Course No. 1621**

**Overview:** This course will teach developers how to build applications that integrate with Microsoft® Active Directory™, improve manageability by using Group Policies, maintain user preferences and computer settings, respond appropriately to system events, and install/uninstall cleanly and correctly. The course concludes with an architectural overview of COM+.

**Prerequisites:** Before taking this course, students must have sufficient skills to pass Exam 70-175 and Exam 70-176.

**Description:** Course length 3 days. Lesson objectives help students become comfortable with the

course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Describe design considerations and deployment scenarios when building a certified custom solution by using Microsoft Windows 2000.
- Build and upgrade applications to meet the requirements for Windows 2000 logo compliance
- Implement new Windows 2000 features in both existing and new applications.
- Describe the best practices developers should use when building a Windows 2000 solution.

## **Component Development Using the Active Template Library 3.0 Functional Specification - Course No. 1304**

**Overview:** This five-day course will teach programmers how to build component-based solutions using the Component Object Model (COM), the Active Template Library 3.0 (ATL), and Microsoft® Visual C++® version 6.0.

**Prerequisites:** Before beginning this course, students should be able to: Describe and use the following C++ fundamentals, Constructors and destructors, Virtual function, Conversion functions, Function overloading, Operator overloading, Accessors. Single and multiple inheritance, Templates. Use the Windows® environment and use the Visual Studio® integrated development environment.

**Description:** Course length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Use COM to address component-based software development issues.
- Build clients of COM objects.
- Build COM object servers.

- Create ActiveX controls.
- Use Visual C++ extensions to create clients of COM objects.
- Build COM objects that reuse existing COM objects.
- Add events to COM objects and clients.
- Create COM objects with dual interfaces.

## **Implementing Microsoft Site Server 3.0 - Course No. 1125**

**Overview:** This course was developed for Microsoft® Site Server version 3.0. The course provides students with the knowledge and skills necessary to implement, support, maintain, optimize, and troubleshoot Web sites using Site Server. This course will cover some basic Web site development tasks requiring knowledge of hypertext markup language (HTML) and Microsoft® Visual Basic® Scripting Edition. However, this course does not require programming skills and will not cover Site Server software interfaces or the Site Server software development kit.

Microsoft Commerce Server and Microsoft Advertising Server (Ad Server) are covered briefly in the Overview module. Full training is available in course 1231, Implementing a Commerce-Enabled Web Site Using Microsoft Site Server 3.0, Commerce Edition.

**Prerequisites:** Successful completion of course 936, Creating and Configuring a Web Server Using Microsoft Internet Information Server 4.0, or equivalent knowledge. The student should be familiar with the common Internet protocols and services (TCP/IP, FTP, etc.) provided by the Microsoft Windows NT® operating system and Internet Information Server (IIS) version 4.0. The student should be able to administer IIS (directories and security) with Microsoft Management Console. Successful completion of course 803; Administering Microsoft Windows NT 4.0, or equivalent knowledge.

**Description:** Course length 4 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon

successful completion of this course, students will be able to:

- Install and configure Microsoft Site Server on a Web site.
- Publish and deploy content to Web sites.
- Tag content to be used in searching and personalization.
- Facilitate the searching of Web sites for specific content.
- Deliver personalized content to clients based on client profiles or group membership.
- Control access to site content using the enhanced security of Site Server.
- Distribute content to clients on a scheduled or subscription basis.
- Easily locate tagged content and share results with others; analyze and report how the content on a Web site is used.
- Build Web sites based on the Customizable Starter Sites in Site Server.

## **Implementing a Commerce-Enabled Web Site Using Microsoft Site Server 3.0 Commerce Edition - Course No. 1231**

**Overview:** This course provides students with the knowledge and skills necessary to support, maintain, optimize, and troubleshoot electronic commerce (e-commerce) sites using Microsoft® Site Server version 3.0, Commerce Edition.

**Prerequisites:** Successful completion of course 1125, Implementing Microsoft Site Server 3.0, or equivalent experience, successful completion of course 1017, Mastering Web-Site Development with Microsoft Visual InterDev™, or equivalent experience. Familiarity with hypertext markup language (HTML) and Microsoft Visual Basic® Scripting Edition

**Description:** Course length 2 days. Lesson objectives help students become comfortable with the

course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Understand the purposes of elec-tronic commerce
- Install Microsoft Site Server 3.0, Commerce Edition
- Manage day-to-day Commerce Server site operations
- Administer Commerce Servers using Server Administration Pages
- Create a Commerce Server site using wizards
- Customize a Commerce Server site through the Order Process Pipeline components; extend Commerce functionality with Microsoft Wallet
- Incorporate rotating advertising into Web sites with Advertising Server
- Implement business-to-business commerce through the Commerce Interchange Pipeline (CIP)
- Optimize a Commerce Server site.

## **Building E - Commerce Solutions - Course No. 1588**

**Overview:** This course teaches developers how to implement business-to-customer and business-to-business commerce solutions using Microsoft® Site Server 3.0, Commerce Edition, and the pipeline technology. Microsoft Commerce Server and Microsoft Advertising Server (Ad Server) are covered briefly in the Overview module. Full training is available in course 1231, Implement-ing a Commerce-Enabled Web Site Using Microsoft Site Server 3.0, Commerce Edition.

**Prerequisites:** Ability to write client- and server-side script in either Microsoft® Visual Basic® Scripting Edition or Jscript Knowledge of object-oriented

programming techniques, familiarity with basic Microsoft® SQL Server® 7.0 commands, such as creating a device, creating a database, and querying a database. Ability to work with Active Server Pages (ASP) and ActiveX Data Objects (ADO) concepts, HTML programming skills, Course 1017, Mastering Web Application Development Using Microsoft® Visual InterDev 6, or equivalent knowledge.

**Description:** Course length 2 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Create the foundation for a commerce-enabled Web site
- Create a simple commerce-enabled Web site
- Import product data to the site
- Create a business-to-customer order-processing pipeline
- Create a custom component for the business-to-customer order-processing pipeline.
- Create a part of a simple business-to-business order-processing pipeline.

## **Building Business-to-Business E-Commerce Solutions – Course No. 1610**

**Overview:** The purpose of this course is to show developers how to implement business-to-business commerce solutions by using Microsoft Site Server Commerce Edition 3.0 and the pipeline technology.

**Prerequisites:** This course assumes that the student has a minimum of beginning/intermediate programming skills as demonstrated by the following competencies: Writing client- and server-side script in either VBScript or Jscript, familiarity with basic Microsoft SQL Server 7.0 commands such as creating a database, querying a database, and so on, ability to work with Active Server Pages

(ASP) and ActiveX Data Objects (ADO), HTML programming skills, and visual Basic programming skills, Building E-Commerce Solutions: 1588.

**Description:** Course length 2 Days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Able to create an e-Partner group on a site to authenticate e-Partners.
- Build and search a catalog on a site.
- Create and transmit a purchase order by using the Transmit pipeline of the Commerce Interchange Pipeline (CIP).
- Receive the purchase order by using the Receive pipeline of CIP.
- Create a pipeline component by using Microsoft Visual Basic and use it in the CIP Manager.
- Create Extensible Markup Language (XML) documents.
- Create Extensible Stylesheet Language (XSL) stylesheets.
- Create a COM object in XML.
- Convert data between XML documents and Electronic Data Interchange (EDI) transaction sets.

## **Mastering Web Site Fundamentals with FrontPage 98- Course No. 1009**

**Overview:** This course teaches new Web developers how to create static and dynamic hyper-text markup language (HTML) pages. Students will learn basic Internet and intranet concepts. They will also learn about the technologies and Microsoft® tools that enable Web development. Students will learn how to create

Web documents by using the Microsoft FrontPage® Web authoring and management tool and by editing the HTML tags directly. Students will create HTML documents that contain forms, standard controls, ActiveX™ controls, Java™ applets, and client-side script. They will also learn how to use the dynamic HTML and data binding features supported by Microsoft Internet Explorer version 4.0. Finally, students will learn how to publish and test Web pages on a Web server. Prerequisites: Before beginning this course, students should be able to: Use a Web browser. Understand event-driven programming concepts such as: Variables, looping statements, and procedures. Objects, properties, methods, and events

**Description:** Course length: 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Identify technologies and supporting tools that enable Web development
- Create HTML documents that contain standard controls, ActiveX controls, Java applets, tables, forms, frames, images, and client script; use dynamic HTML
- Create an HTML page that uses data binding to read data from a database
- Use Microsoft Office 97 to create and publish documents on a Web server.
- Use FrontPage 98 to publish HTML documents on a Web server.

## **Mastering Database Fundamentals Using Microsoft Access 2000 - Course No. 1539**

**Overview:** This course will teach Microsoft® Excel users how to use Microsoft Access 2000 to create a single-user database using wizards and Design view.

**Prerequisites:** Ability to use Excel to maintain an address book or list of employees, familiarity with Microsoft Windows® operating system, familiarity

with Office applications.

**Description:** Course length: 2 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Create an appropriate schema for a small-group database application
- Use Access wizards to create tables
- Queries, forms, and reports for a simple database
- Customize tables, queries, forms, and reports in Design view.

## **Mastering Microsoft Access 2000 Programming-Course No. 1300**

**Overview:** This course will teach programming concepts and how to add simple functionality to a Microsoft Access database using Microsoft Visual Basic® for Applications.

**Prerequisites:** Before beginning this course, students should be able to:

- Design a relational database.
- Use Microsoft Access to:
  - § Create a database with multiple tables, forms, and reports.
  - § Create queries.

### **Recommended:**

- Six months of experience using Microsoft Access
- Completion of Course 1539, Mastering Database Fundamentals Using Microsoft Access 2000

**Description:** Course length: 3 days. Lesson objectives help students become

comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Use the programming capabilities of Microsoft Visual Basic for Applications in Microsoft Access applications to write custom functions and event-driven procedures.
- Validate data.
- Find and trap errors.
- Gain access to and manipulate data in tables using ActiveX® Data Objects (ADO) and Structured Query Language (SQL).
- Create a custom switchboard for an Access application.

## **Building Client/Server Applications with Microsoft Access 2000 - Course No. 1379**

**Course Description:** Overview: This course will teach Microsoft® Access 2000 developers how to design, develop, and deploy a client/server database application by using Access 2000 and Microsoft Data Engine (MSDE).

**Prerequisites:** This course assumes that the student has the skills to perform the following:

Design a relational database, and Design a workgroup Access application. Use Access to: Create a database with multiple tables, forms, and reports, and Create queries, write Structured Query Language (SQL) SELECT, UPDATE, INSERT, and DELETE statements that retrieve and modify records in a database, use an event-driven programming language, such as Microsoft Visual Basic® to: Create functions and sub procedures, declare variables, create loops and conditional statements, create event procedures, and Add error handling to procedures.

**Recommended Prerequisite Courses:** Course 1539, Mastering Database Fundamentals Using Microsoft Access 2000, Course 1300, Mastering Microsoft Access 2000 Programming.

**Description:** Course length 3 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon

successful completion of this course, students will be able to:

- Design a client/server application that uses Access 2000 and MSDE
- Move an Access application from a Microsoft Jet database to an MSDE database
- Use the Access data tools to create MSDE elements such as tables, relationships, stored procedures, triggers, views, and data diagrams
- Create stored procedures that add, manipulate, and delete data in MSDE tables
- Create forms to display record sets returned from stored procedures
- Create unbound forms by using Microsoft ActiveX® Data Objects (ADO)
- Create unbound forms to display and manipulate disconnected recordsets
- Deploy a client/server Access application.

## **Introduction to Web Development Technologies – Course No. 1912**

**Overview:** The goal of this course is to provide students with the knowledge and skills necessary to develop Web applications by using Web development tools and technologies such as HTML, Microsoft® FrontPage® 2000, Microsoft Visual Basic® Scripting Edition, Microsoft ActiveX®, and Active Server Pages (ASP). This course is intended for people who want to develop dynamic and professional-looking business Web sites. Ability to write macros or computer code is not assumed, but would be very helpful.

**Prerequisites:** Basic knowledge of HTML, and Basic programming experience.

**Description:** Course length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to create an interactive Web page

## **Creating and Managing Web Sites Using Microsoft FrontPage 2000 - Course No. 1592**

**Overview:** This course provides students with the knowledge and skills necessary to create and manage a Web solution using Microsoft® FrontPage® 2000. This two-day, instructor-led course is a combination of lecture, interactive demonstrations, and hands-on labs.

**Prerequisites:** Before beginning this course, students should have: Working knowledge of Microsoft productivity tools such as Microsoft Word, Microsoft PowerPoint®, and Microsoft Excel. Working knowledge of Microsoft Internet Explorer and basic Web navigation skills.

**Description:** Course length 2 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Explain the types of Web solutions that can be created using FrontPage 2000.
- Explain the primary client and server features of FrontPage.
- Explain the intranet construction process including site administration, user interface, and opening a new Web file.
- Design, add, and modify a user interface including themes, content, and shared borders.
- Design, implement, and modify site navigation tools.
- Add and edit design elements such as graphics, animations, and frames.
- Add additional functionality to a site using forms, discussion Webs, and database links.
- Publish a site, perform basic site administration, and generate site management reports

## **Building Web Applications Using Microsoft Visual InterDev 6 - Course No. 1582**

**Overview:** This course provides students with the knowledge and skills necessary to maximize the functionality of an existing Web site using Microsoft Visual InterDev™ 6.0 integrated Web development system tools. The one-day workshop emphasizes hands-on experience. An equal amount of time is dedicated to lecture and labs.

This course draws on content from and is a companion to Course 1017, Mastering Web Application Development Using Microsoft Visual InterDev; Course 1298, Mastering Distributed Application Design and Development Using Microsoft Visual Studio® 6; and Course 1016, Mastering Enterprise Development Using Microsoft Visual Basic® 6.

**Prerequisites:** Before beginning this course, students should have: A working knowledge of HTML, a basic understanding of scripting and programming concepts, a basic understanding of Microsoft Web development products, including Microsoft Internet Information Server, and FrontPage® Web site creation and management tool, and Visual InterDev.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Import an existing Web site into Visual InterDev 6.0.
- Enhance the site using the Site Designer and cascading style sheets (CSS).
- Create forms using active server pages (ASP).
- Convert or add data-driven pages using Microsoft ActiveX® Data Objects and SQL Server™ databases.
- Add custom business components to Web pages.
- Detect varying browsers and provide optimized content.
- Convert or add pages using mail functionality that has CDONT and Visual InterDev 6.0

object browsing capability.

## **Mastering Web Application Development Using Microsoft Visual InterDev 6 - Course No. 1017**

**Overview:** This course teaches site developers who perform architectural planning, technology selection, or Web site programming tasks how to create enterprise-level Web sites that use component object model (COM) components on both the client and the server.

**Prerequisites:** Before beginning this course, students should be able to: Browse World Wide Web sites with Microsoft Internet Explorer, send and receive electronic mail with a mail client such as Microsoft Exchange, state differences between two-tier and three-tier client/server architecture models, define the Internet and what it is used for, compose a new hypertext markup language (HTML) document with an HTML authoring program such as the Microsoft FrontPage® Web site creation and management tool. And use ActiveX® controls and Java applets on a Web page. Use a database development tool to: Execute queries and call stored procedures. Discriminate between record sets and tables. Write a simple SQL query using SELECT and WHERE.

**Description:** Course length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Describe the issues involved in creating an enterprise Web site. •Create and publish a simple Web site with Microsoft® Visual InterDev™ Web development system version 6.0.
- Create interactive content for a Web site.
- Add server scripting to a Web page using active server pages (ASP) and COM components.
- Implement security in a Web site.
- Read and write information to an OLE DB provider from ASP using Visual InterDev data

tools.

- Build reusable, robust COM components with Microsoft Visual Basic® programming system version 6.0 that are compatible with Microsoft Transaction Server (MTS).
- Integrate Web solutions with Microsoft BackOffice® family services.

## **System Administration for Microsoft SQL Server 7.0 – Course No. 832**

**Overview:** This course provides students with the knowledge and skills required to install, configure, administer, and troubleshoot Microsoft® SQL Server™ client/server database management system version 7.0. Course 832 is a major revision of course 867: System Administration for Microsoft SQL Server 6.5. The course content is being revised to reflect significant changes in the product and to be more task-oriented.

**Prerequisites:** Course 578- Networking Essentials, Course 803- Administering Windows NT 4.0 and Course 922- Supporting Microsoft Windows NT® 4.0 Core Technologies or equivalent knowledge.

**Equivalent knowledge:** The ability to Install and configure Windows NT, change network settings using the Control Panel, be familiar with disk mirroring, disk striping, and striping with parity (RAID 0, 1, and 5), view and interpret data from the Windows NT event log using the Event Viewer, view and interpret data from the Windows NT Performance Monitor, an understanding of basic relational database concepts, including: Logical and physical database design, data integrity concepts, relationships between tables and columns (primary key and foreign key, one-to-one, one-to-many, many-to-many), how data is stored in tables (rows and columns), knowledge of basic Transact-SQL syntax (SELECT, UPDATE, and INSERT statements), and Familiarity with the role of the database administrator

**Description:** Course length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Describe SQL Server architecture
- Plan, install and configure SQL Server
- Manage files and databases
- Choose a login security method and configure login security
- Plan and implement database permissions
- Transfer and migrate data into databases
- Back up databases
- Restore databases
- Monitor SQL Server performance
- Automate administrative tasks
- Replicate data from one SQL Server to another
- Create custom administrative tools
- Perform basic tuning of a SQL Server.

## **Implementing a Database in Microsoft SQL Server 7.0 – Course No. 833**

**Overview:** This course provides students with the technical skills required to implement a database solution with Microsoft SQL Server™ client/server database management system version 7.0.

**Prerequisites:** Experience using the Microsoft Windows NT® Server network operating system,

one year of experience with relational databases, three to six months of SQL Server experience and an understanding of basic ANSI SQL statements.

**Description:** Course length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Describe the elements of Microsoft SQL Server 7.0 and the environments in which it can operate.
- Describe the elements of the Transact-SQL language.
- Describe and configure the data storage architecture of SQL Server.
- Create and manage files, file groups, databases, tables, and transaction logs.
- Enforce data integrity using constraints, defaults, and rules.
- Plan for appropriate use.
- Create and maintain indexes.
- Write queries that retrieve and modify data using joins and sub queries.
- Write queries that summarize data.
- Manage locking options and transactions to ensure data concurrency and recoverability.
- Create views of data.
- Design and create stored procedures.
- Design and create triggers.
- Work with distributed data.

## Data Warehouse Using Microsoft SQL Server 7.0 – Course No. 1502

**Overview:** This course provides students with the technical skills required to plan, implement, and maintain a data warehouse using Microsoft® SQL Server™ client/server database management system version 7.0.

**Prerequisites:** Familiarity with Microsoft SQL Server 7.0, course 832, System Administration for Microsoft SQL Server 7.0, Course 833, Implementing a Database on Microsoft SQL Server 7.0, Knowledge of Transact-SQL usage in the development of online transaction processing (OLTP) systems, Basic understanding of programming principles (especially experience with a scripting language such as Microsoft Visual Basic® Scripting Edition or Microsoft JScript® development software), understanding of basic database design, administration, and implementation concepts.

**Description:** Course length 3 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Describe basic data warehousing concepts.
- Design a data warehousing system and implement a database designed with a star schema in SQL Server.
- Gather data from primary data sources, transform it, and place it in a SQL Server staging database.
- Create a cube using OLAP (online analytical processing) Services.
- Analyze cube data using existing client applications.
- Build custom clients using Microsoft English Query, ADO MD, OLE DB for OLAP, and DSO; maintain a SQL Server data warehouse.
- Manage a SQL Server data warehouse.

## **Implementing Business Solutions with MDX in Microsoft SQL Server 2000 - Course No. 2093**

**Overview:** This course provides students with the knowledge and skills necessary to use multidimensional expressions (MDX) to add calculated members and other dynamically calculated values to an Analysis Services cube by using Microsoft SQL Server 2000.

**Prerequisites:** Successful completion of course 2074, Designing and Implementing OLAP Solutions Using Microsoft SQL Server 2000, or equivalent experience

**Description:** Course length 3 Days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Understand and use multidimensional terminology.
- Add calculated members to a cube.
- Use MDX member functions to navigate within a hierarchy.
- Use MDX time functions to compare values over time.
- Use MDX set functions in a query statement.
- Use functions to manipulate sets of members.
- Use functions to aggregate values from a set of members.
- Apply MDX to make a cube change dynamically.
- Calculate formulas for specific blocks of cells.

- Control the order of calculations within a cube.
- Apply MDX in common customer and sales applications.
- Apply MDX in common financial applications.

## **Querying Microsoft SQL Server 2000 with Transact-SQL – Course No. 2071**

**Overview:** This course provides students with the technical skills required to write Transact-SQL queries for Microsoft® SQL Server™ 2000.

**Prerequisites:** Before attending this course, students must have: An understanding of basic relational database concepts, including: Logical and physical database design, data integrity concepts, relationships between tables and columns (primary key and foreign key, one-to-one, one-to-many, and many-to-many). How data is stored in tables (rows and columns). For students who do not meet these Prerequisites, the following course provides students with the necessary knowledge and skills: Course 1609, Designing Data Services and Data Models Familiarity with the role of the database administrator.

**Description:** Course length 2 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Describe the uses of the Transact-SQL language.
- Write SELECT queries to retrieve data.
- Modify data by using Transact-SQL.
- Write complex queries by using functions and control-of-flow language in batches and scripts.
- Write queries that summarize data.

- Join data from multiple tables.
- Write queries that retrieve and modify data by using sub queries.
- Query text fields with full-text search.
- Write queries to solve business problems.

## **Administering a Microsoft SQL Server 2000 Database – Course No. 2072**

**Overview:** This course provides students with the knowledge and skills required to install, configure, administer, and troubleshoot the client-server database management system of Microsoft® SQL Server™ 2000. Course 2072 is a revision of course 832: System Administration for Microsoft SQL Server 7.0. The course content is being revised to reflect changes in the product.

**Prerequisites:** Before attending this course, students must have: Experience using the Microsoft Windows® 2000 operating system to: Connect clients running Windows 2000 to networks and the Internet. Configure the Windows 2000 environment. Create and manage user accounts. Manage access to resources by using groups. Configure and manage disks and partitions, including disk striping and mirroring. Manage data by using NTFS. Implement Windows 2000 security. Optimize performance in Windows 2000.

**Students who do not meet these Prerequisites, the following courses will provide the necessary knowledge and skills:** Course 2151, Microsoft Windows 2000 Network and Operating System Essentials, Course 2152, Implementing Microsoft Windows 2000 Professional and Server, An understanding of basic relational database concepts, including: Logical and physical database design, Data integrity concept, Relationships between tables and columns (primary key and foreign key, one-to-one, one-to-many, and many-to-many), How data is stored in tables (rows and columns).

**Students who do not meet these Prerequisites, the following will provide the necessary**

**knowledge and skills:** Course 1609, Designing Data Services and Data Models, Knowledge of basic Transact-SQL syntax (SELECT, UPDATE, and INSERT statements).

**Students who do not meet these Prerequisites, the following course will provides the necessary knowledge and skills:** Course 2071, Querying Microsoft SQL Server 2000, Familiarity with the role of the database administrator.

**Description:** Course length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Describe SQL Server architecture.
- Plan for a SQL Server installation, and then install an instance of SQL Server.
- Manage files and databases, including determining resource requirements.
- Choose a login security method, configure login security, plan and implement database permissions, and describe how to secure SQL Server in an enterprise network.
- Perform and automate administrative tasks and create custom administrative tools.
- Back up databases and implement a backup strategy.
- Restore databases.
- Monitor and optimize SQL Server performance.
- Transfer and migrate data into databases.
- Describe how to replicate data from one SQL Server to another.
- Maintain the high-availability of SQL Server

**Programming a Microsoft SQL Server 2000 Database –Course No. 2073**

**Overview:** This course provides students with the technical skills required to program a database solution by using Microsoft® SQL Server™ 2000

**Prerequisites:** Before attending this course, students must have: Experience using the Microsoft Windows® 2000 operating system to: Connect clients running Windows 2000 to networks and the Internet, configure the Windows 2000 environment, create and manage user accounts,



manage access to resources by using groups, configure and manage disks and partitions, including disk striping and mirroring, manage data by using the NTFS file system, Implement Windows 2000 security, and Optimize performance in Windows 2000.

**Students who do not meet this prerequisite, the following courses will provide the necessary knowledge and skills:** Course 2151, Microsoft Windows 2000 Network and Operating System Essentials, course 2152, Implementing Microsoft Windows 2000 Professional and Server, an understanding of basic relational database concepts, including: Logical and physical database design, data integrity concepts, relationships between tables and columns (primary key and foreign key, one-to-one, one-to-many, many-to-many), and how data is stored in tables (rows and columns).

**Students who do not meet this prerequisite, the following course will provide the necessary knowledge and skills:** Course 1609, Designing Data Services and Data Models, knowledge of basic Transact-SQL syntax (SELECT, UPDATE, and INSERT statements).

Students who do not meet this prerequisite, the following course will provide students with the necessary knowledge and skills: Course 2071A, Querying Microsoft SQL Server 2000 with Transact-SQL Familiarity with the role of the database administrator.

**Description:** Course length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon

successful completion of this course, students will be able to:

- Describe the elements of SQL Server 2000
- Design a SQL Server enterprise application architecture
- Describe the conceptual basis of programming in Transact-SQL
- Create and manage databases and their related components
- Implement data integrity by using the IDENTITY column property, constraints, defaults, rules, and unique identifiers
- Plan for the use of indexes
- Create and maintain indexes
- Create, use, and maintain data views
- Implement user-defined functions
- Design, create, and use stored procedures
- Create and implement triggers
- Program across multiple servers by using distributed queries, distributed transactions, and partitioned views
- Optimize query performance
- Analyze queries by using Graphical Show plan
- Manage transactions and locks to ensure data concurrency and recoverability.

**Designing and Implementing OLAP Solutions Using Microsoft SQL Server 2000 - Course No. 2074**

**Overview:** This course provides students with the knowledge and skills necessary to design, implement, and deploy OLAP solutions by using Analysis Services.

**Prerequisites:** Basic understanding of database design, administration, and implementation concepts.

**Satisfactory level of comfort within the Microsoft Windows® 2000 environment**

**Description:** Course length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Define the term OLAP and its role within data warehousing.
- Design multidimensional data marts by using star and snowflake schemas.
- Recognize the fundamental components of a cube.
- Understand the architecture of Analysis Services.
- Create dimensions from relational dimension tables.
- Understand the many types of dimensions.
- Utilize various dimension properties and settings.
- Design OLAP dimensions based upon underlying source data.
- Create cubes by using the Cube Wizard and Cube Editor.
- Create and manipulate measures.
- Develop and understand virtual cubes.
- Design cube storage and aggregations.
- Update dimensions and cubes when source data changes.

- Optimize the processing of dimensions and cubes.
- Create partitions within cubes.
- Implement simple calculations by using MDX and calculated members.
- Use Microsoft Excel 2000 as an OLAP front-end application.
- Understand how data mining fits within OLAP and the Microsoft data warehousing framework.
- Employ actions, drill-through, and write-back for data analysis.
- Design and implement cube and dimension security.
- Automate the processing of dimensions and cubes through Data Transformation Services (DTS).
- Create cubes and virtual cubes based upon end-user requirements.

## **Implementing and Supporting Microsoft Internet Information Services 5.0 - Course No. 2295**

**Overview:** The goal of this course is to provide a solution for the customers' need to have trained IT support personnel to implement, support, and maintain Microsoft Internet Information Services (IIS) 5.0. This course is intended for IT support professionals who need to implement and support IIS 5.0. This course specifically addresses the job requirements of IT support professionals who administer and monitor IIS 5.0-based Web servers, and network systems engineers who configure and secure IIS 5.0 Web sites.

**Prerequisites:** Before attending this course, students must have: Completed Course 2153, Implementing a Microsoft Windows 2000 Network Infrastructure,

or have equivalent knowledge of TCP/IP, DNS, certificate services, and tasks that are performed in Microsoft Windows® 2000 Server.

**Description:** Course length 3 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Install IIS 5.0.
- Create and configure IIS 5.0 Web and FTP sites.
- Administer a single IIS Web site or multiple IIS Web sites.
- Implement security on an IIS server.
- Configure Web applications.
- Monitor and optimize a Web server.
- Configure IIS to provide e-mail support.
- Configure and manage Microsoft FrontPage-extended webs.
- Explain implementation differences based on the specific role of the IIS Web server.

## **Applying IIS 4.0 Technologies - Course No. 953**

**Overview:** This course is a one-day overview covering Microsoft® Internet Information Server (IIS) 4.0. The course will highlight the key features of IIS; installation, configuration, and management using Microsoft Management Console and the Internet Service Manager snap-in; security and encryption; and creation of virtual directories and servers, Active Server Pages, and Web site indexing. The course will not cover basic Web publishing skills such as hyper-text markup language (HTML) authoring.

**Prerequisites:** Install Microsoft Windows NT® Server network operating system version 4.0. Install Transmission Control Protocol/ Internet Protocol (TCP/IP) on Windows NT Server, Explain how dynamic host configuration protocol (DHCP), Windows® Internet Naming Service (WINS), and domain name system (DNS) can be used to resolve TCP/IP addresses. Obtain and use a TCP/IP address, explain the Windows NT Server domain structure, assign permissions to users and groups. The course materials, lectures, and lab exercises are in English. To benefit fully from our instruction, students need an understanding of the English language and completion of the prerequisites.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Determine which Internet Information Server components are required to create a specific intranet or Internet site
- Install IIS 4.0
- Manage and configure IIS using the Internet Service Manager snap-in for the Microsoft Management Console
- Configure WWW, FTP, SMTP, and NNTP services on IIS
- Determine and implement IIS security and encryption features
- Create virtual directories and servers
- Add Active Server Pages functionality to a Web site
- Implement full-text search capabilities using Microsoft Index Server version 2.0
- Use Site Server Express to analyze Web site usage and manage Web site performance.

**Implementing Microsoft Internet Explorer 4.0 - Course No. 956**

**Overview:** This course provides students with a strong foundation in the architecture and key features of Microsoft® Internet Explorer version 4.0. Information provided in this course enables students to set up, configure, use, and deploy Internet Explorer in a network environment—with particular emphasis on intranet use.

**Prerequisites:** This course requires that students meet the following, install the Microsoft Windows NT® operating system, install Microsoft Internet Information Server, create a Web page using hypertext markup language (HTML).

**Description:** Course length 2 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Explain the features of Microsoft Internet Explorer 4.0
- Install Internet Explorer; create an active Web page
- Customize Web views and the Active Desktop™ view
- Configure Internet Mail and News
- Use Microsoft NetMeeting™ conferencing software to share applications, chat, use the white board, and set up audio and video conferences
- Configure site sub-scriptions and channels
- Download Web content for use offline
- Deploy a pre-configured version of Internet Explorer using the Microsoft Internet Explorer Administration Kit.

**MS Exchange Server 5.5 Series—Concepts and Administration-  
Course No. 1026**

**Overview:** This introductory course in the Microsoft Exchange Server 5.5 series is intended for Microsoft Exchange Server system administrators who administer, monitor, and maintain established Exchange Server organizations. The goal of this course is to provide Exchange Server administrators with the skills required to perform day-to-day management of an established Exchange Server organization. These management tasks may include: Use the Exchange Server Administrator program to create and manage recipient objects. Maintain an existing Exchange Server organization including the management of objects in the Site and Servers container in the Administrator program. Create and manage public folders. Perform basic server backup procedures. Monitor server performance and configure link monitors between connected sites. Perform the administrative tasks required to manage electronic forms in an organization. This course also provides students with the prerequisite knowledge and skills required for course 973B, Microsoft Exchange Server 5.5 Series-Design and Implementation.

**Prerequisites:** Attend course 803, Administering Microsoft Windows NT 4.0, or possess equivalent skills and knowledge.

**Description:** **Course length 4 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:**

- Configure an Exchange server
- Develop an infrastructure for Exchange Server
- Choose a client installation and integration strategy
- Develop long-term administration strategies
- Develop security strategies
- Configure message recipients
- Import directory data from other mail systems
- Install and configure Exchange Server clients

- Configure address lists and accounts by using the Administrator program
- Configure message tracking
- Configure server locations
- Configure security; manage site security; manage users
- Manage distribution lists
- Manage the directory
- Manage public and private information stores
- And back up and restore an Exchange server
- Configure a link monitor and server monitor

## **MS Exchange Server 5.5 Series-Design and Implementation - Course No. 973**

**Overview:** Course 973B builds upon the base of knowledge that students gained in course 1026B, Microsoft Exchange Server 5.5 Series-Concepts and Administration. In course 1026B, students learned the administrative functions required to maintain an existing Exchange Server organization. In course 973B, students examine the design considerations and the component functionality required for creating and implementing an Exchange Server organization. During course 973B, students study the underlying architecture of Exchange Server and learn how the components interact to provide messaging functionality. Once students have learned how the Exchange Server services transmit information, they examine the basic implementation and functionality of Exchange Server. During this part of the course, students install the product, create and configure the various messaging connectors, and configure directory and public folder

replication. Next, students learn how to configure Exchange Server for connectivity to the Internet. During this part of the course, students learn which Internet protocols Exchange Server supports and how Exchange Server implements additional components, such as the Internet Mail Service, to provide full Internet functionality. The course concludes by examining how Exchange Server provides for connectivity to foreign messaging systems such as Lotus cc:Mail, Lotus Notes, and Microsoft Mail and Schedule+.

**Prerequisites:** Complete course 922, Supporting Microsoft Windows NT® 4.0 Core Technologies, or possess equivalent knowledge. Complete course 1026B, Microsoft Exchange Server 5.5 Series—Concepts and Administration, or possess equivalent knowledge, such as performing the following administrative tasks: Create and manage recipients, Maintain existing Exchange Server configurations, Perform basic backup procedures, Monitor connections and server performance, Create and manage public folders, Maintain electronic forms, Deploy Microsoft Outlook in an organization, Knowledge of Microsoft Internet Information Server (IIS) version 4.x and Internet Explorer version 4.x (recommended)

**Description:** Course length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Choose an implementation of Microsoft Exchange Server.
- Develop the configuration of an Exchange Server computer.
- Identify strategies for migration from previous versions of Exchange Server to version 5.5.
- Develop a long-term coexistence strategy.
- Develop an infrastructure for Exchange Server.
- Install Exchange Server.
- Configure connectivity to a mail system other than Exchange Server.
- Configure synchronization of directory information between Exchange Server and other mail systems.

- Configure Directory Replication.
- Configure the Message Transfer Agent (MTA) within a site.
- Configure the MTA among sites.
- Configure Internet protocols and services.
- Configure security.
- Manage private information stores.
- Manage connectivity.
- Optimize foreign connections and site-to-site connections.

## **Implementing and Administering Microsoft Exchange 2000 - Course No. 1572**

**Overview:** This course provides students with the knowledge and skills necessary to install, configure, and administer Exchange 2000. This five-day, instructor-led course also provides prerequisite knowledge and skills required for course 1573, designing and Deploying a Microsoft Exchange 2000 Organization.

**Prerequisites:** Working knowledge of Microsoft Windows<sup>®</sup> 2000, completion of course 1560, updating Support Skills from Windows NT 4.0 to Windows 2000, or course 2154, Implementing and Administering Microsoft Windows 2000 Directory Services, or equivalent working knowledge, working knowledge of networking, including TCP/IP, DNS, and IIS, working knowledge of Internet protocols (including POP3 or IMAP4, SMTP, HTTP, and NNTP), knowledge of Exchange Server 5.5 (beneficial but not essential)

**Description:** Course length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course,

students will be able to:

- Describe features and benefits of Exchange 2000.
- Install Exchange 2000.
- Create and manage Storage Groups, Mailbox Stores, and Public Folder Stores.
- Create and manage Users, Contacts, and Distribution Lists.
- Create and manage Public Folders.
- Configure a Full-Indexing.
- Create and apply Mailbox Store and Public Folder Store Policies.
- Create SMTP Connector to the Internet.
- Connect Exchange Routing Groups.
- Track messages.
- Connect Internet clients to Exchange 2000.
- Configure Outlook Web Access, Web Folders, and Exchange Installable File System.
- Configure Instant Messaging and Chat.
- Monitor the Exchange 2000 system.
- Backup and restore Exchange 2000.

**Designing Microsoft Exchange 2000 for the Enterprise – Course No. 1573**

**Overview:** The goal of this course is to provide students with the knowledge and skills necessary to design a Microsoft® Exchange 2000 organization for an enterprise environment. It is designed to complement Course 1572B: Implementing and Managing Microsoft Exchange 2000. This course does not discuss the migration or upgrade processes needed to implement a design. It focuses on designing an environment based on the business needs of an organization that requires multiple routing and administrative groups.

**Prerequisites:** Complete Course 1560: Updating Support Skills from Windows NT 4.0 to Windows 2000 or Course 2154: Implementing and Administering Microsoft Windows 2000 Directory Services or equivalent working knowledge. Complete Course 1572: Implementing and Managing Microsoft Exchange 2000. Have a working knowledge of networking, including Transmission Control Protocol/Internet Protocol (TCP/IP), Domain Name System (DNS), and Internet Information Services (IIS). Possess a working knowledge of Internet protocols including Post Office Protocol version 3 (POP3) or Internet Message Access Protocol version 4 (IMAP4), Simple Mail Transfer Protocol (SMTP), Hypertext Transfer Protocol (HTTP), and Network News Transfer Protocol (NNTP). Knowledge of Exchange Server 5.5 is beneficial but not essential.

**Description:** Course length 3 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Evaluate the impact of the Active Directory™ directory service design on the Exchange 2000 design.
- Design an administrative topology.
- Design the routing topology.
- Design a public folder topology.
- Design a security strategy.
- Plan server roles and placement.

- Design a management and operations plan.

## **Upgrading from Microsoft Exchange Server 5.5 to Microsoft Exchange 2000 - Course No. 2355**

**Overview:** The goal of this course is to provide students with the essential skills and knowledge required to upgrade from Microsoft Exchange Server 5.5 to Microsoft Exchange 2000, including the issues and procedures related to upgrading, restructuring, and providing coexistence during the deployment process. The course will focus on choosing the appropriate strategy to achieve the Exchange 2000 design, while leveraging the information stored in the existing messaging system. It is assumed that the desired Active Directory™ directory service and Exchange 2000 designs already exist. This course is intended for senior information technology (IT) professionals who are responsible for deploying an Exchange 2000 design in an existing Exchange Server 5.5 environment. Students for this course typically work in medium to large computing environments with multiple physical locations, mixed client connection protocols, and Internet messaging connectivity. These individuals have one or more years of messaging experience, and may be responsible for the design, implementation, and administration of Exchange.

**Prerequisites:** Before attending this course, students must have: Knowledge about Microsoft Windows NT® version 4.0 Server Administration. (This knowledge could be demonstrated by attending Course 922, Supporting Microsoft Windows NT 4.0 Core Technologies, or by passing Exam 70-068, Implementing and Supporting Microsoft Windows NT Server 4.0 in the Enterprise, or Exam 70-067, Implementing and Supporting Microsoft Windows NT Server 4.0.), knowledge about Exchange Server 5.5, (This knowledge could be demonstrated by attending Course 973, Microsoft Exchange Server 5.5 Series-Design and Implementation, or by passing Exam 70-081, Implementing and Supporting Microsoft Exchange Server 5.5.), knowledge about Microsoft Windows® 2000 Advanced Server. (This knowledge could be demonstrated by attending Course

2154, Implementing and Administering Microsoft Windows 2000 Directory Services, or Course 1560, Updating Support Skills from Microsoft Windows NT 4.0 to Microsoft Windows 2000, or by passing Exam 70-215, Installing, Configuring, and Administering Microsoft Windows 2000 Server, or Exam 70-240, Microsoft Windows 2000 Accelerated Exam for MCPs Certified on Microsoft Windows NT Server 4.0), knowledge about administration and design for Microsoft Active Directory service. (This knowledge could be demonstrated by attending Course 1556, Administering Microsoft Windows 2000, and Course 1561, Designing a Microsoft Windows 2000 Directory Services Infrastructure, or by passing Exam 70-217, Implementing and Administering a Microsoft Windows 2000 Directory Services Infrastructure, and Exam 70-221, Designing a Microsoft Windows 2000 Network Infrastructure, or Exam 70-240, Microsoft Windows 2000 Accelerated Exam for MCPs Certified on Microsoft Windows NT 4.0). Knowledge about managing and implementing Exchange 2000. (This knowledge could be demonstrated by attending Course 1572, Implementing and Managing Microsoft Exchange 2000, or by passing Exam 70-224, Installing, Configuring, and Administering Microsoft Exchange 2000 Server.) Knowledge of Transmission Control Protocol/Internet Protocol (TCP/IP) and Domain Name System (DNS). (This knowledge could be demonstrated by attending Course 2153, Implementing a Microsoft Windows 2000 Network Infrastructure, or by passing Exam 70-216, Implementing and Administering a Microsoft Windows 2000 Network Infrastructure, or Exam 70-240, Microsoft Windows 2000 Accelerated Exam for MCPs Certified on Microsoft Windows NT 4.0, or Exam 70-059, Internetworking with Microsoft TCP/IP on Microsoft Windows NT 4.0.)

**Description:** Course length 2 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Explain the process of upgrading from Exchange Server 5.5 to Exchange 2000.
- Populate the Active Directory with Exchange Server 5.5 user information and keep the two directories (Active Directory and the Exchange Server 5.5 directory) synchronized by using the Active Directory Connector (ADC).
- Plan and deploy recipient connection agreements.

- Establish and maintain both messaging coexistence and directory coexistence between Exchange Server 5.5 and Exchange 2000.
- Upgrade an existing Exchange Server 5.5 messaging environment to Exchange 2000.
- Upgrade the messaging environment by moving data from an existing Exchange Server 5.5 organization to a new Exchange 2000 organization.
- Choose an upgrade deployment strategy and create a deployment project plan for upgrading Exchange Server 5.5 to Exchange 2000.

## **Secure Web Access Using Microsoft Proxy Server 2.0 – Course No. 836**

**Overview:** This course is an update for course 664, Supporting Microsoft® Proxy Server 1.0. As in 664, this course will cover: Installation, configuration, and trouble-shooting, basic architecture  
Methods of controlling Internet access, using Internet Service Manager to administer Proxy Server  
Configuring the cache, enhancements to Performance Monitor, and methods of improving performance. In addition, the course has been updated to reflect new features of the product, including the Web publishing enhancements of reverse hosting and reverse proxy, hierarchical and distributed arrays, and packet filtering.

**Prerequisites:** Successfully complete the following Microsoft Certified Professional exams or their related courses: Exam 70-077, Implementing and Supporting Microsoft Internet Information Server 3.0 and Microsoft Index Server 1.1, or course 826, Creating and Configuring a Web Server Using Microsoft Tools. Exam 70-058, Network Fundamentals, or course 578, Networking Essentials (self-paced training), Exam 70-067, Implementing and Supporting Microsoft Windows NT® Server 4.0, or course 803, Administering Microsoft Windows NT 4.0, or course 753, Microsoft Windows NT 4.0 Network Administration Training, Exam 70-059, Internetworking Microsoft TCP/IP on

Microsoft Windows NT 3.51, or course 688, Internetworking Microsoft TCP/IP on Microsoft Windows NT 4.0.

**Description:** Course length 2 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Install, configure, and administer Microsoft Proxy Server version 2.0
- Describe the architecture
- Identify important registry entries
- Enable error logging
- Identify and use troubleshooting resources
- Troubleshoot Internet access problems
- Protect a network; implement security
- Identify specific performance issues
- Explain the impact of security on performance
- Use Performance Monitor to determine specific performance problems
- Optimize performance
- Balance Internet access across multiple Proxy Server installations
- Use multiple Proxy Server installations to enhance performance
- Identify potential issues when using Proxy Server in an intranet (with no access to the Internet)
- Implement fault tolerance

- Plan a Proxy Server site based on a given situation
- Determine the appropriate type of Internet access for various users
- Determine the hard-ware and software required for a specific configuration
- Arrange for proper connec-tivity with an Internet service provider (ISP)
- Create a rollout plan for inte-grating Proxy Server in an existing environment.

## **Deploying and Managing Microsoft Office 2000 – Course No. 1332**

**Overview:** This course provides students with the knowledge and skills required to plan a deployment strategy, perform installation and configuration tasks, and perform day-to-day administration tasks in a Microsoft® Office 2000 environment. It also provides the knowledge necessary to troubleshoot installation, configuration, management, and administration problems. In addition, it provides the skills needed to deploy Office 2000 by using Microsoft Systems Management Server.

**Prerequisites:** Proficiency using the Microsoft Windows® interface to locate, create, and manipulate folders and files, to create shortcuts, and to configure the desktop environment, knowledge of basic computer hardware components, including computer memory, hard disks, central processing units (CPUs), communication and printer ports, display adapters, and pointing devices. Successful completion of Course 803: Administering Microsoft Windows NT 4.0 Core Technologies or equivalent knowledge, administration of a Web server or experience with Microsoft Internet Information Server 4.0. Experience supporting networks or end-users.

**Description:** Course length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Install Office 2000.
- Control the Office 2000 setup process.
- Describe ways to use the Microsoft Windows Installer and work with the Installer.
- Customize the user environment by using Office 2000 profiles and policies.
- Create Office 2000 administrative installations.
- Upgrade to Office 2000.
- Support roaming users in Office 2000.
- Manage Web-based documents.
- Install an Office Server Extensions (OSE) Server.
- Describe the functionality of Office 2000 Worldwide support and use the Worldwide executable.
- Describe functionality of Office 2000 coexistence.
- Describe functionality of using Office 2000 with the Microsoft Terminal Server.
- Plan for and deploy Office 2000.
- Manage and maintain Office 2000.
- Describe the functionality of Microsoft Systems Management Server.
- Install the Systems Management Server 2.0 evaluation product.
- Update the Systems Management Server Site Server client computers.

## **Mastering Microsoft Office 2000 Solution Development – Course No.**

# 1301

**Overview:** This course will teach developers how to build solutions that access data and automate business processes by using Microsoft Office 2000.

**Prerequisites:** Use basic features of the Microsoft Word and Excel applications, record simple macros by using Macro Recorder and invoke them, demonstrate familiarity with the Visual Basic development system and event-driven programming concepts including, writing a Function procedure and a Sub procedure.

Handling an event procedure, retrieving and validating information from a user, building a user interface by using forms and controls, describing the relationship among objects, properties, and methods, adding run-time error handling to an application, running an application and using debug mode within the Visual Basic environment, define basic database concepts such as tables and queries, and use SQL syntax to create database queries, and define basic concepts of the Internet, intranets, and Web browsing.

**Alternative Prerequisites:** Completing either of the following courses satisfies the Visual Basic-related prerequisite skills listed above: Course 1300, Mastering Microsoft Access 2000 Programming , and Course 1303, Mastering Microsoft Visual Basic 6.0 Fundamentals.

**Description:** Course length 5 Days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Describe design considerations and deployment scenarios when building a custom solution by using Microsoft Office 2000.
- Determine whether Microsoft Visual Basic® for Applications code should be part of a specific document, a document template, or a component object model (COM) add-in.
- Use Visual Basic Editor to write and run Visual Basic for Applications code and manage files.
- Customize the user interface of Office 2000 applications by using command bars and forms.
- Connect to data sources and retrieve data by using ActiveX® Data Objects (ADO).

- Use the Office 2000 applications to access data in a relational or no relational database, and manipulate and present the data.
- List and describe some of the more commonly used objects in the Office 2000 object models.
- Use the Microsoft Excel object model to programmatically navigate, format, present, and analyze data.
- Use the features in Office 2000 Developer to build a COM add-in, use digital signatures to enhance security, and deploy your applications.
- Use the Microsoft FrontPage® 2000 Web site creation and management tool to create a Web site and display documents created in other Office 2000 applications.

## **Implementing and Supporting Microsoft Windows XP Professional - Course No. 2272**

**Overview:** The purpose of this course is to address the implementation and desktop support needs of customers that are planning to deploy and support Microsoft® Windows® XP Professional in a variety of stand-alone and network operating system environments. It provides in-depth, hands-on training for Information Technology (IT) professionals responsible for the planning, implementation, management, and support of Windows XP Professional.

**Prerequisites:** Before attending this course, students must have: A+ certification, or equivalent knowledge. Network+ certification, or equivalent knowledge, completed Course 2028A, Basic Administration of Microsoft Windows 2000, or have equivalent knowledge of administrative tasks.

**Description:** Course length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Install Windows XP Professional and upgrade to Windows XP Professional.

- Automate an installation of Windows XP Professional by using answer files and Uniqueness Database Files (UDFs), or by using the Microsoft Windows 2000 System Preparation Tool.
- Configure and manage hardware on a computer running Windows XP Professional.
- Manage disks.
- Configure and manage file systems.
- Troubleshoot the boot process and other system issues.
- Configure the desktop environment, and use profiles to control desktop customization.
- Configure and support Transmission Control Protocol/Internet Protocol (TCP/IP).
- Configure Windows XP Professional to operate on Windows networks.
- Support remote users.
- Configure Windows XP Professional for mobile computing.
- Monitor resources and performance.

## **Managing and Maintaining a Microsoft Windows Server 2003 Environment – Course 2273**

**Overview:** This course combines five days of instructor-led training to provide students with the knowledge and skills that are required to manage accounts and resources, maintain server resources, monitor server performance, and safeguard data in a Microsoft Windows Server™ 2003 environment.

**Prerequisites:** Before attending this course, students must have:

- CompTIA A+ certification, or equivalent knowledge and skills.
- CompTIA Network+ certification, or equivalent knowledge and skills.

**Description:** Course Length: 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- § Create and populate organizational units with user and computer accounts.
- § Manage user and computer accounts.
- § Create and manage groups.
- § Manage access to resources.
- § Implement printing.
- § Manage printing.
- § Manage access to objects in organizational units.
- § Implement Group Policy.
- § Manage the user and computer environment by using Group Policy.
- § Audit accounts and resources.
- § Prepare to administer server resources.
- § Configure a server to monitor system performance.
- § Monitor system performance.
- § Manage device drivers by configuring device driver signing and restoring a device driver.
- § Manage hard disks.
- § Manage data storage.
- § Manage disaster recovery.
- § Maintain software by using Microsoft Software Update Services.

## **Implementing, Managing, and Maintaining a Microsoft Windows Server 2003 Network Infrastructure: Network Services – Course 2277**

**Overview:** This course provides students with the knowledge and skills to implement, manage, and maintain a Microsoft Windows Server™ 2003 network infrastructure. The course is intended for systems administrator and systems engineer candidates who are responsible for implementing, managing, and maintaining server networking technologies. These tasks include implementing routing; implementing, managing, and maintaining Dynamic Host Configuration Protocol (DHCP), Domain Name System (DNS), and Windows Internet Name Service (WINS); securing Internet Protocol (IP) traffic with Internet Protocol

security (IPSec) and certificates; implementing a network access infrastructure by configuring the connections for remote access clients; and managing and monitoring network access.

**Prerequisites:** Implementing a Microsoft Windows Server 2003 Network Infrastructure: Network Hosts, or have equivalent knowledge and skills.

**Description:** Course Length: 5 days. . Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Configure routing by using the Routing and Remote Access service.
- Allocate IP addressing by using DHCP.
- Manage and monitor DHCP.
- Resolve names.
- Resolve host names by using DNS.
- Manage and monitor DNS.
- Resolve network basic input/output system (NetBIOS) names by using WINS.
- Secure network traffic by using IPSec and certificates.
- Configure network access.
- Manage and monitor network access.

## **Planning and Maintaining a Microsoft Windows Server 2003 Network Infrastructure – Course 2278**

**Overview:** The goal of this five-day course is to provide students with the knowledge and skills necessary to plan and maintain a Windows® Server 2003 network infrastructure.

**Prerequisites:** Course 2277: Implementing, Managing, and Maintaining a Microsoft Windows Server 2003 Network Infrastructure: Network Services, or have equivalent knowledge and skills.

**Description:** Course length: 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Plan a TCP/IP physical and logical network.
- Plan and troubleshoot a routing strategy.
- Plan a Dynamic Host Configuration Protocol (DHCP) strategy.
- Optimize and troubleshoot DHCP.
- Plan a Domain Name System (DNS) strategy.
- Optimize and troubleshoot DNS.
- Plan and optimize Windows Internet Naming Service (WINS).
- Plan, optimize, and troubleshoot IPsec network access.
- Troubleshoot network access.

## **Planning, Implementing, and Maintaining a Microsoft Windows Server 2003 Active Directory Infrastructure – Course 2279**

**Overview:** This course provides students with the knowledge and skills to successfully plan, implement, and troubleshoot a Microsoft Windows Server™ 2003 Active Directory® directory service infrastructure. The course focuses on a Windows Server 2003 directory service environment, including forest and domain structure, Domain Name System (DNS), site topology and replication, organizational unit structure and delegation of administration, Group Policy, and user, group, and computer account strategies.

**Prerequisites:** Course 2278: Planning and Maintaining a Windows Server 2003 Network Infrastructure, or have the equivalent knowledge and skills.

**Description:** Course Length: 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Describe the logical and physical components of Active Directory.

- Create and configure a forest and domain structure by using an Active Directory infrastructure design.
- Plan and implement an organizational unit structure.
- Plan and implement Active Directory user, group, and computer accounts.
- Plan and implement a Group Policy strategy to centrally manage users and computers in an enterprise.
- Deploy, manage, and troubleshoot software that is deployed using Group Policy.
- Implement sites to manage and monitor Active Directory replication.
- Plan and implement the placement of domain controllers, global catalog servers, and DNS servers that are integrated with Active Directory.
- Plan and manage operations masters.
- Back up, restore, and maintain Active Directory.
- Plan and implement an Active Directory infrastructure that is based on a directory service design that an enterprise architect provides.

## **Designing a Microsoft Windows Server 2003 Active Directory and Network Infrastructure – Course 2282**

**Overview:** This course provides students with the knowledge and skills to design a Microsoft Active Directory® directory service and network infrastructure for a Microsoft Windows Server™ 2003 environment. The course is intended for systems engineers who are responsible for designing directory service and/or network infrastructures.

**Prerequisites:** Course 2278, Planning and Maintaining a Microsoft Windows Server 2003 Network Infrastructure and Course 2279, Planning, Implementing, and Maintaining a Microsoft Windows Server 2003 Active Directory Infrastructure or equivalent knowledge.

**Description:** Course length: 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Describe the process of designing an Active Directory infrastructure and a network infrastructure that supports Active Directory.
- Design a forest and domain infrastructure that meets the needs of an organization.
- Design a site infrastructure that meets the needs of an organization.
- Design a Group Policy structure that meets the needs of an organization.
- Design an administrative structure that meets the needs of an organization.
- Design a physical network structure that supports Active Directory and meets the needs of an organization.
- Design a Dynamic Host Configuration Protocol (DHCP) structure that supports Active Directory and meets the needs of an organization.
- Create a design for network connectivity that supports Active Directory and meets the needs of an organization.
- Design a name resolution strategy that supports Active Directory and meets the needs of an organization.
- Design a network access infrastructure that supports Active Directory and meets the needs of an organization.

## **Implementing and Managing Microsoft Exchange Server 2003 – Course 2400**

**Overview:** This course provides students with the knowledge and skills that are needed to update and support a reliable, secure messaging infrastructure. This infrastructure is used for creating, storing, and sharing information by using Microsoft Exchange Server 2003 in a medium-sized to large-sized (250 to 5,000 seats) messaging environment. This course offers a significant amount of hands-on practices, discussions, and assessments that assist students in becoming proficient in the skills that are needed to update and support Exchange Server 2003.

### **Prerequisites:**

- Working knowledge of Microsoft Windows Server™ 2003.
- Working knowledge of networking, including Transmission Control Protocol/Internet Protocol (TCP/IP), Domain Name System (DNS), and Internet Information Services (IIS).

- Working knowledge of Internet protocols, including Post Office Protocol version 3 (POP3) or Internet Message Access Protocol version 4 (IMAP4), Simple Mail Transfer Protocol (SMTP), Hypertext Transfer Protocol (HTTP), and Network News Transfer Protocol (NNTP).
- Knowledge of Exchange Server 5.5 or Exchange 2000 Server is beneficial but not necessary.

**Description:** Course length: 5 days. . Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Perform a clean installation of Exchange Server 2003 and verify that the installation was successful.
- Describe the process for upgrading to Exchange Server 2003 from Exchange 2000.
- Configure and manage Exchange Server 2003.
- Manage interoperability between Exchange Server 2003 and Exchange 2000.
- Secure Exchange Server 2003.
- Manage recipients.
- Manage public folders.
- Manage address lists.
- Implement and manage client access with Internet protocols.
- Manage client configuration and connectivity.
- Manage routing.
- Manage mobile devices with Exchange Server 2003.
- Manage data storage and hardware resources.
- Plan for disaster and disaster recovery.
- Back up and restore Exchange.
- Perform preventive maintenance.
- Migrate users from Exchange Server 5.5 to a separate Exchange Server 2003 organization.

## Deploying Microsoft Windows XP Professional – Course No. 2520

**Course Description:** Overview: This course provides the tools and knowledge needed to plan and deploy Microsoft® Windows® XP Professional in medium to large-sized organizations. Through lecture and labs, students will learn to: explain the various methods that are available to deploy Windows XP Professional; deploy Windows XP Professional by using answer files and Remote Installation Services (RIS); prepare a computer for imaging; and upgrade client computers to Windows XP Professional by using Microsoft Systems Management Server (SMS) 2.0 and software distribution by using Group Policy. This one-day course is designed for software deployment specialists working for Microsoft Certified Partners, and IT administration and support professionals responsible for the planning and deployment of desktop operating systems in medium to large-size organizations. The typical Windows XP deployment managed by these individuals will range from 25-250 desktops per installation, but may vary.

**Prerequisites:** Before attending this course, students must have: General knowledge of installing and configuring Microsoft Windows NT® 4.0 Workstation or Microsoft Windows 2000 Professional, and A+ certification and Network+ certification or equivalent knowledge, general knowledge of Active Directory™ directory services, general knowledge of Microsoft Management Console (MMC), and General knowledge of networking concepts, including network operating systems, and server-client relationships.

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Explain the various methods and identify the technologies that are available to deploy Windows XP Professional.
- Deploy Windows XP Professional by using answer files.
- Prepare a computer for imaging.

- Deploy Windows XP Professional by using Remote Installation Services.
- Automate an upgrade of Windows XP Professional.

## **Pre-Installing Microsoft Windows XP for OEMs - Course No. 2290**

**Overview:** The goal of this course is to provide Microsoft partner OEMs and system builders with the skills and knowledge required to successfully leverage the Microsoft® Windows® XP OEM Preinstallation Kit (OPK) to preinstall the Microsoft Windows XP operating systems on new computers. This course is based on an interim build of Windows XP Professional and the Windows XP OPK. This one-day course is designed for computer professionals within OEM accounts who are tasked with installing and configuring the Microsoft Windows XP Professional and Home Edition operating systems.

**Prerequisites:** Before attending this course, students must have: General knowledge of pre-installing and configuring Microsoft Windows Millennium Edition, Microsoft Windows 98, or Microsoft Windows 2000, general knowledge of pre-installing operating systems by using the OPK, general knowledge of Windows Welcome customizations and how to use Sysprep for imaging, general knowledge of networking concepts, including network operating systems, client/server relationships, and local area networks (LANs).

**Description:** Course length 1 day. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Preinstall Windows XP by using the OPK.
- Customize the Windows XP Pre-installation and install the Step-by-Step Interactive (SBSI) training programs.
- Use troubleshooting techniques to identify and resolve common pre-installation issues, and identify support resources.
- Identify PC Health features in Windows XP and describe the Windows XP activation process.

## **Introduction to ASP.NET- Course No. 2063**

**Overview:** The goal of this course is to teach students how to create a simple Microsoft ASP.NET application that delivers dynamic content to the Web. This course is intended for developers of Microsoft Active Server Pages (ASP). In taking this course, it is assumed that students are familiar with Hypertext Markup Language (HTML), client-side and server-side scripting, and Microsoft ActiveX Data Objects (ADO).

**Prerequisites:** Before attending this course, students must be able to create forms and tables in HTML, write Microsoft Visual Basic or Visual Basic Scripting Edition (VBScript) code, create an ASP page and retrieve data from a relational database by using ADO.

**Description:** Course length: 3 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Create a Web form with server controls.
- Separate page code from content by using code-behind pages, user controls, and components.
- Display dynamic data from a data source by using Microsoft ADO.NET and data binding.
- Debug ASP.NET pages by using trace.
- Use a Web service to enhance a Web application.
- Add configuration, authentication, and state management to an ASP.NET Web application.

## **Administering Microsoft Systems Management Server 2.0 - Course No. 827**

**Overview:** This three-day, instructor-led course provides students with the knowledge and skills required to administer Microsoft® Systems Management

Server (SMS) version 2.0. It could be subtitled “A Day in the Life of an SMS Administrator.” Students will learn how to discover and install clients, distribute software to client computers, collect hardware and software inventory, use software-metering features, and use the remote tools. Students will learn to troubleshoot common errors and use Crystal Reports to produce a variety of reports. This course is a prerequisite for course 828: Deploying and Supporting a Microsoft Systems Management Server 2.0 Site.

**Prerequisites:** Experience installing and configuring software applications and Microsoft Windows NT® operating systems, experience helping end users solve computer problems, and passing of the Networking Essentials certification exam or equivalent knowledge.

**Description:** Course length 3 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- List and describe the elements that make up an SMS 2.0 site
- Discover and install an SMS client
- Collect and view hardware and software inventory
- Distribute software to selected resources (computers, users, user groups)
- Configure and use software metering
- Produce database reports; configure, install, and use remote tools
- Troubleshoot common problems with inventory collection, software distribution, remote tools, and software metering.

## **Deploying and Supporting Microsoft SMS 2.0 - Course No. 828**

**Overview:** This five-day instructor-led course provides students with the

knowledge and skills required to deploy and support Microsoft® Systems Management Server (SMS) version 2.0. Students will learn how to design a site, including organizing a site hierarchy and planning for resource needs. They will install different types of sites, establish a site hierarchy, configure site-to-site communications, and install clients in multiple sites. Students will learn how to troubleshoot problems in site installation, client installation, site-to-site communications, and each of the key features of SMS 2.0. They will trace a task from its initiation through to its completion, by following the various threads that take part in carrying out the task. Students will use Network Monitor to trace network traffic associated with SMS tasks. This course supports the Microsoft Certified Systems Engineer certification program.

**Prerequisites:** Complete course 827, Administering Microsoft Systems Management Server 2.0, or have equivalent knowledge. Be certified on Microsoft Windows NT® Server network operating system version 4.0 or have equivalent knowledge. Be certified on Microsoft Windows NT Workstation operating system version 4.0 or have equivalent knowledge

**Description:** Course length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Install a primary and secondary site server
- Use the appropriate diagnostic tool when troubleshooting problems in an SMS site
- Configure a site hierarchy
- Configure site-to-site communications
- Integrate Novell NetWare servers in an SMS site
- Configure SMS and simple network management protocol (SNMP) integration
- Configure site system roles
- Manage clients and site systems in multiple sites

- Diagnose and resolve problems with SMS functions
- Optimize and maintain Microsoft SQL Server™ for SMS
- Back up and restore an SMS site
- Define an SMS site
- Analyze resource requirements to implement a site
- Secure an SMS site.

## **Building XML-Based Web Applications- Course No. 1905**

**Overview:** Learn how to create Document Type Definitions (DTD's) to structure and validate data in documents. You will also learn how to get data from a database using eXtensible Markup Language (XML), and eXtensible StyleSheet Language (XSL) to present XML data.

**Prerequisites:** Knowledge of HTML Knowledge of relational databases, Programming with Microsoft Visual Basic, Visual Basic for Applications, or VBScript, and knowledge of a data-access API such as DAO, RDO, or ADO.

**Recommended Prerequisite Courses:** Course 1013 Mastering Microsoft Visual Basic 6 Development, and Course 1017 Mastering Visual InterDev 6.0.

**Description:** Course Length 5 Days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- List the uses and benefits of XML on a Web site.
- Create well-formed and valid XML documents.
- Create an XML schema.

- Use XSL to display XML data in a Web browser.
- Use XSL to transform XML data into a different format.
- Display dynamic XML data in a Web browser by using data binding and the Document Object Model.
- Use ASP and ADO to read data from a data source and store it as XML.
- Add, delete, and update data on the client by using XML and saving data to a database on the server.

## **Introduction to C# Programming for Microsoft .NET Platform- Course No. 2124**

**Overview:** The goal of this course is to provide students with the knowledge and skills they need to develop C# applications for the Microsoft .NET Platform. The course focuses on C# program structure, language syntax, and implementation details. C# was created to be the programming language best suited for writing enterprise applications for .NET. C# combines the high productivity of Microsoft Visual Basic® with the raw power of C++. It is a simple, object-oriented, and type-safe programming language that is based on the C and C++ family of languages. This course is intended for experienced developers who already have programming experience in C, C++, Visual Basic, or Java. These developers will be likely to develop enterprise business solutions.

**Prerequisites:** Before attending this course, students must have experience with programming in C, C++, Visual Basic, Java, or another programming language and a familiarity with the Microsoft .NET strategy as described on the Microsoft .NET Web site: <http://www.microsoft.com/net/>.

**Description:** Course length: 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- List the major elements of the .NET Framework and explain how C# fits into the .NET Platform.

- Analyze the basic structure of a C# application and be able to document, debug, compile, and run a simple application.
- Create, name, and assign values to variables.
- Use common statements to implement flow control, looping, and exception handling.
- Create methods (functions and subroutines) that can return values and take parameters.
- Create, initialize, and use arrays.
- Explain the basic concepts and terminology of object-oriented programming.
- Use common objects and reference types.
- Create, initialize, and destroy objects in a C# application.
- Build new C# classes from existing classes.
- Create self-contained classes and frameworks in a C# application.
- Define operators, use delegates, and add event specifications.
- Implement properties and indexers.
- Use predefined and custom attributes.

## **Programming Microsoft NET Framework with Microsoft Visual C# - Course No. 2349**

**Overview:** The goal of this course is to help application developers understand the Microsoft .NET Framework. In addition to offering an overview of the .NET Framework and an introduction to key concepts and terminology, the course provides a series of labs, which introduce and explain .NET Framework features

that are used to code, debug, tune, and deploy applications.

This course is intended for experienced, professional software developers, including those employed by independent software vendors and software companies or working on corporate internal development teams. Most students will be Microsoft WIN32®, Microsoft Visual Basic®, or Microsoft Visual C++® developers.

**Prerequisites:** Before attending this course, students must be proficient in the C++ or Java programming languages and have been exposed to the C# language. Students can meet these prerequisites by taking Course 2124, Introduction to C# Programming for the Microsoft .NET Platform.

**Description:** Course length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- List the major elements of the .NET Framework and explain how they fit into the .NET platform.
- Explain the main concepts behind the common language runtime and use the features of the .NET Framework to create a simple application.
- Create and use components in Windows Forms-based and ASP.NET-based applications.
- Use the deployment and versioning features of the .NET runtime to deploy multiple versions of a component.
- Create, use, and extend types by understanding the Common Type System architecture.
- Create classes and interfaces that are functionally efficient and appropriate for given programming scenarios.
- Use the .NET Framework class library to efficiently create and manage strings, arrays, collections, and enumerators.
- Use delegates and events to make an event-sender object signal the occurrence of an action to an event-receiver object.
- Describe and control how memory and other resources are managed in the .NET Framework

## **Programming the Microsoft .NET Framework with Visual Basic .NET - Course No. 2415**

**Overview:** The goal of this course is to help application developers understand the Microsoft .NET Framework. In addition to offering an overview of the .NET Framework and an introduction to key concepts and terminology, the course provides a series of labs, which introduce and explain .NET Framework features that are used to code, debug, tune, and deploy applications.

This course is intended for experienced, professional software developers, including those employed by software companies or working on corporate development teams. Most students will be Microsoft Visual Basic® developers.

**Prerequisites:** Before attending this course, students must be proficient in the Microsoft Visual Basic® programming language and have been exposed to the Visual Basic .NET language. Students can meet these prerequisites by taking Course 2373, Programming with Microsoft Visual Basic .NET

**Description:** Course length 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- List the major elements of the .NET Framework and explain how they will fit into the .NET platform.
- Explain the main concepts behind the common language runtime and use the features of the .NET Framework to create a simple application.
- Create and use components in Windows Forms-based and ASP.NET-based applications.
- Use the deployment and versioning features of the .NET runtime to deploy multiple versions of a component.
- Create, use, and extend types by understanding the Common Type System architecture.
- Create classes and interfaces that are functionally efficient and appropriate for given

programming scenarios.

- Use the .NET Framework class library to efficiently create and manage strings, arrays, collections, and enumerators.
- Use delegates and events to make an event-sender object signal the occurrence of an action to an event-receiver object.
- Describe and control how memory and other resources are managed in the .NET Framework.
- Read from and write to data streams and files.
- Use the basic request/response model to send and receive data over the Internet.
- Serialize and deserialize an object graph.
- Create distributed applications by means of Web Service and Object Remoting.

## **Building XML-Enabled Applications Using Microsoft SQL Server 2000 - Course No. 2091**

**Overview:** The goal of this course is to provide students with the knowledge and skills they need to build applications that exchange data with Microsoft SQL Server in Extensible Markup Language (XML) format. This course is intended for developers of database client applications, including Internet and N-tiered application clients. It is also intended for SQL Server database developers who need to query, insert, update, or delete data from a database by using XML, and for SQL Server database administrators who need to publish SQL data as XML.

**Prerequisites:** Before attending this course, students must: Have written basic Transact SQL statements to query, insert, update, and delete information from a database, and used joins to retrieve information from multiple tables. Have knowledge of relational database design, including the use of primary and foreign keys. Students should know how to create databases, tables, and stored

procedures. Students should also be familiar with the SQL Server Query Analyzer and SQL Profiler tools. Have knowledge of basic XML formats and techniques, including attributes and elements, schemas, the Extensible Stylesheet Language (XSL) and Extensible Stylesheet Language Transformations (XSLT), and the XML Path Language (XPath). Be able to access a data source by using ADO. Be able to write VBScript code. Be able to read standard Hypertext Markup Language (HTML), and build a form to gather and present data. Be able to create Active Server Pages (ASP pages) by using the ASP Programming model. Skills include using the **POST** and **GET** methods, using the **Response** object, and using the **Session** object. Taking one or more of the following courses will help the students meet the prerequisites and get more out of the course: Course 1905, Building XML-Based Web Applications Course 2033, Programming Microsoft SQL Server.

**Description:** Course Description 3 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Describe the XML features provided by SQL Server 2000 and the SQL Server-XML architecture
- Generate and specify the structure of an XML document from SQL Server data by using Transact-SQL
- Insert XML data into SQL Server and use XML to modify existing data
- Use ADO to access SQL Server data and generate XML
- Publish a SQL Server database on the Internet/intranet over HTTP and query the data by using a Uniform Resource Locator (URL)
- Create and use XML templates to query the database
- Create and use annotated schemas to query and transform SQL Server data
- Describe how SQL Server and XML are used in real-world Internet applications.

## **Exchanging and Transforming Data Using XML and XSLT - Course No. 1913**

**Overview:** The goal of this course is to teach developers techniques for exchanging and transforming data by using the Extensible Markup Language (XML) and Extensible Stylesheet Language Transformations (XSLT). The course describes best practices for XML and XSLT and gives compelling examples of the best ways to solve real-world problems.

**Prerequisites:** Before attending this course, students must have: A moderate degree of Web development experience using HTML and XML. A moderate degree of experience scripting with Visual Basic for Applications, VBScript, or JavaScript, some prior experience using COM objects, Active Server Pages (ASP pages), and either Visual Basic or Microsoft Visual C++®. Taking one or more of the following courses will help the students meet the prerequisites and get more out of the course: Course 1905, Building XML-Based Web Applications Course 1013, Mastering Microsoft Visual Basic 6 Development, Course 1017, Mastering Web Application Development Using Microsoft Visual InterDev 6.

**Description:** Course length: 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Define XML Path Language (XPath) expressions to locate and filter the content of an XML document
- Define XSLT style sheets to transform XML documents at the Web browser and Web server
- Create and change XML structure by using XSLT; use XSLT to merge different XML documents and generate cross-references between them.
- Create a Visual Basic application that uses the Simple API for XML (SAX) to access large XML documents.

## **Mastering Microsoft Access 2000 Programming - Course No. 1300**

**Overview:** This course will teach programming concepts and how to add simple functionality to a Microsoft® Access database using Microsoft Visual Basic® for Applications.

**Prerequisites:** Before beginning this course, students should be able to: Design a relational database Use Microsoft Access to: Create a database with multiple tables, forms, and reports Create queries.

**Recommended:** Six months of experience using Microsoft Access Completion of course 1539A, Mastering Database Fundamentals Using Microsoft Access 2000

**Description:** Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Use the programming capabilities of Microsoft Visual Basic for Applications in Microsoft Access applications to write custom functions and event-driven procedures
- Validate data
- Find and trap errors
- Access and manipulate data in tables using ActiveX® Data Objects (ADO) and Structured Query Language (SQL); and create a custom switchboard for an Access application.

## **Introduction to XML and the Microsoft .NET Technologies- Course No. 2500**

**Overview:** This two-day instructor-led course provides a technological overview of the structure and programming techniques of XML. This course shows where XML figures into the Microsoft .NET vision and into the larger world of distributed standards based computing.

**Prerequisites:** Before attending this course, students must have: Working knowledge of a scripting or programming language. Working knowledge of

HTML, working knowledge of how databases are used in distributed computing environments.

**Description:** Course length 2 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Describe how XML fits into the overall vision of distributed computing using Microsoft .NET technologies.
- Create a well-formed XML document.
- Use XML Schemas to validate an instance document.
- Describe how DOM, XPath, XSL/XSLT and XQuery are used to create real world solutions.
- Describe how SQL Server 2000 uses XML.
- Match appropriate XML standards (MSXML, MathXML, etc.) and technologies (DOM, XSLT, XSD, XQuery, and XPath) to address a range of solution requirements.
- Identify the next logical Microsoft .NET training experience and readily justify the decision to enroll in further Microsoft .NET training.

## **Developing Collaborative Solutions Using Microsoft Office XP Developer- Course No. 2380**

**Overview:** The goal of this course is to provide students with the knowledge and skills to use Microsoft Office XP Developer, Microsoft Office Web Components, smart tags, the Simple Open Access Protocol (SOAP) Toolkit 2.0 SP2, and SharePoint™ Team Services from Microsoft to build solutions that access structured data in Microsoft SQL Server™ 2000, and then to share code and package and deploy these Office solutions.

**Prerequisites:** Before attending this course, students must have: Knowledge of intranets and the Internet including browser operation and server-side scripting using Active Server Pages (ASP), knowledge of database concepts and common online transaction processing (OLTP) use of SQL Server version 7.0, knowledge of object models and their properties, methods, and events.

Familiarity with the Microsoft Office 2000 suite of applications and their associated object models, familiarity with high-level object-oriented programming languages, such as Microsoft Visual Basic® and Microsoft Visual Basic Scripting Edition (VBScript).

**Description:** Course Length 4 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Explain the concepts and advantages of a collaborative approach to business problems and describe the main development tools of Office XP.
- Use the Microsoft Code Librarian to reduce application development time.
- Use SOAP to access remote objects from Office XP applications.
- Describe the workflow process, describe the architecture of a workflow solution, and design a workflow process.
- Use the Microsoft development environment to create workflow solutions based on SQL Server.
- Create a digital dashboard by using the Microsoft SQL Server Digital Dashboard download.
- Use the Microsoft development environment to create a Web Part.
- Use SharePoint Team Services to present and organize data in a collaborative application.
- Add workflow to a SharePoint Team Services list.
- Build a custom Office XP smart tag.
- Use Office Web Components to interactively analyze data.

## **Deploying Microsoft Office XP- Course No. 2505**

**Overview:** The goal of this course is provide information technology (IT)-support

professionals who are responsible for desktop software and hardware deployments with the skills necessary to successfully deploy and configure

Microsoft Office XP. This includes migration strategies from Office 9x or Office 2000 on Microsoft Windows® 9x or Windows 2000 operating system platforms.

**Prerequisites:** Before attending this course, students must have: Expertise with Microsoft Windows desktop administration (Windows 98, Windows NT®, and/or Windows 2000) to locate, create, and manipulate folders and files, and configure desktop environments. Completed Course 2151, Microsoft Windows 2000 Network and Operating System, or equivalent knowledge. Experience supporting networks or end-users.

**Description:** Course Length: 2 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Prepare for an Office XP deployment by selecting an Office XP product suite and creating an administrative installation point.
- Customize an Office XP installation by using the Custom Installation Wizard, the Office Profile Wizard, and system policies.
- Select a method for deploying Office XP.
- Upgrade a computer running Office 97 to Office XP.
- Maintain and repair Office XP installations.
- Explain how to deploy Office XP in a multilingual environment.

## **Securing and Deploying Microsoft .NET Assemblies- Course No. 2350**

**Overview:** The goal of this course is to enable developers to build *Microsoft*® .NET compatible applications by using assemblies, which are the basic unit of versioning, isolation, security, and deployment in the .NET Framework

environment. This course provides developers with a solid understanding of how to develop and deploy private and shared assemblies. It focuses on configuration, versioning, and security issues. Topics include: Types of assemblies, side-by-side versioning in the global assembly cache, MSI deployment using Microsoft Visual Studio® .NET deployment projects, strong-name signing, Code Access Security, .NET role-based security, and Isolated storage. The course also includes an introduction to interoperation between .NET components and Microsoft WIN32® code and COM code.

**Prerequisites:** Before attending this course, students must have: Attended Course 2349A, Programming, Microsoft .NET Framework with C#, or have a solid understanding of the .NET Framework, a basic skill level in C#, or a working knowledge of and comfort with C++ syntax, a working knowledge of COM., create self-contained classes and frameworks in a C# application, define operators, use delegates, and add event specifications, implement properties and indexers, use predefined and custom attributes.

**Description:** Course length 3 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Define the term assembly, list the programming problems that assemblies solve, and describe how code in an assembly is executed.
- Describe the purpose of metadata and the manifest, and their relationship to the .NET Framework.
- Create single-file and multi-file assemblies.
- Use code signing to create strong-named assemblies.
- Create Visual Studio .NET deployment projects to deploy assemblies using the Microsoft Windows® Installer.
- Describe how type safety, verification, and strong-name signing improve application security.
- Explain how the .NET security system uses policy to map information about an assembly to a set of resource access rights for an assembly.

- Use code access security to develop and use secure assemblies.
- Implement role-based security in an assembly by using principals and identities, and create and use isolated storage.
- Call Win32 code and COM objects from assemblies.

## **Developing XML Web Services Using Microsoft Visual C# .NET - Course No. 2524**

**Overview:** The goal of this course is to provide students with the knowledge and skills required to develop Web Services based solutions to solve common problems in the distributed application domain. The course focuses on using the Microsoft Visual Studio® .NET, Microsoft Visual C#™ .NET, Microsoft ASP.NET, and Universal Description, Discovery, and Integration (UDDI) to enable students to build, deploy, locate, and consume Web Services.

**Prerequisites:** Before attending this course, students must have: An understanding of how to read and write Extensible Markup Language (XML) documents. Experimented with simple C# applications. Developed distributed applications using Microsoft Visual Basic®, Java, or C++.

**Description:** Course length 3 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

Explain how Web Services emerged as a solution to the problems with traditional approaches to designing distributed applications.

- Describe the architecture of a Web Services-based solution.
- Describe the underlying technologies of Web Services and explain how the Microsoft .NET Framework can be used to implement Web Services using these technologies.
- Implement a Web Service consumer by using Microsoft Visual Studio .NET Beta 2.
- Implement a simple Web Service by using Visual Studio .NET Beta 2.
- Publish and deploy a Web Service.

- Secure a Web Service.
- Evaluate the trade-offs and issues involved in designing a real-world Web Service.
- Implement nonstandard Web Services such as HyperText Markup Language (HTML) screen scraping and aggregating Web Services.

## **Building Corporate Portals Using Digital Dashboards – Course No. 2382**

**Overview:** The goal of this course is to teach developers the best ways to use the Digital Dashboard Services Component to create advanced Web Parts. The course contains information about building solutions on the SQL Server and WSS data stores, and will enable students to extend a Microsoft® SharePoint™ Portal Server dashboard site by creating administrative and personal productivity Web Parts. Also, the course will expand on the Digital Dashboard Resource Kit's introduction to dashboard security and personalization, teach developers and administrators how to deploy complete digital dashboard sites, and address the issues of customization and deployment on mobile devices.

**Prerequisites:** Before attending this course, students must have: Familiarity with Microsoft tools, Familiarity with Microsoft technologies including XML, ASP, Office, DHTML, Exchange 2000 WSS, and Microsoft SQL.

**Description:** Course length 3 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Select the most appropriate data store for a digital dashboard.
- Create a basic digital dashboard and be familiar with the contents of the DDRK.
- Create and modify Web Parts using the digital dashboard user interface and Microsoft Office Developer (MOD).
- Create Web Part content using Office 10.
- Create advanced Web Parts that use scripting, applying best design practices.

- Use the Digital Dashboard Services Component (DDSC) to create advanced, interactive Web Parts.
- Use the Software Developer's Kit (SDK) to extend the SharePoint Portal Server for user productivity, administration and management.
- Provide security controls for Digital Dashboards.

## **Planning Collaborative Solutions with Microsoft Office XP Technologies - Course No. 2381**

**Overview:** The goal of this course is to teach business decision-makers in the Developer arena how to plan for the use of Microsoft Office XP with other collaborative technologies, so that they are delivering the most appropriate solution to real-work problems.

Potential students of the course are aware that they can do more with these products than their current implementation, but they do not know exactly what they can do, what skills are needed or how to approach the design of a collaborative application. This overview course will provide a framework for the evaluation of these technologies, what business problems they can help resolve, and the skill sets needed for each of the technologies. This will allow us the opportunity to direct them to specific Microsoft courseware that will provide the depth skills needed by their developers for these technology implementations.

**Prerequisites:** (None)

**Description:** Course length 2 days: Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Describe the Principal Functions of Office XP, SharePoint Portal Server, SharePoint Team Services, Exchange 2000, SQL Server, and BizTalk Server.
- Define the requirements and identify the skills necessary to integrate line-of-business data into Office XP.
- Define the requirements and identify the skills necessary to implement an approval routing process using Office XP and Exchange 2000 Server.
- Define the requirements and identify the techniques and skills necessary for teams to

collaboratively create and publish Web content using Office XP.

- Define the requirements and identify the collaborative technologies and skills necessary in SharePoint Portal Server, and explain how they can be used to enhance the process of content creation.
- Define the requirements and identify the skills necessary to use Digital Dashboard technology to aggregate on-line data, to modify Digital Dashboards, and to create new Web Parts for Digital Dashboards.

## Cisco Authorized Course Descriptions and Prerequisites



### BCMSN - Building Cisco Multi-Layer Switched Networks

**Overview:** The purpose of BCMSN is to teach network administrators how to build campus networks using multilayer switching with various forms of high speed Ethernet. This course shows how the routing and switching technologies covered in other courses work together. It also introduces IP multicast technology, culminating in a lab featuring IP/TV delivery of content over a routed and switched network using IP multicast, PIM multicast routing, and CGMP in

Ethernet switches. The course has a number of hands-on labs and will be an integral part of the Cisco Career Certifications program, part of the recommended training path for Cisco Certified Network Professional (CCNP) status. The labs use the Cisco 2912 XL and Cisco Catalyst 5505 (Sup IIG with RSFC) hardware, but the configuration commands covered apply broadly across all the Cisco switching products.

**Prerequisites:** Prior to taking this course, the student should complete the following Cisco Systems, Inc., WWT education offerings: Introduction to Cisco Router Configuration (ICRC) 11.3 AND Cisco LAN, Switch Configuration (CLSC) 3.0 or Cisco Router and LAN Switches (CRLS) 3.0, Interconnecting Cisco Network Devices (ICND) 1.0. The typical student should be familiar with internetworking fundamentals prior to taking this course. The typical student should also have hands-on experience with basic router and switch configuration tasks, and be able to configure a simple VLAN. Students should have the following skills: Basic router configuration, Basic switch configuration, Basic VLAN configuration, Spanning Tree Protocol configuration, Inter-Switch Link configuration, Standard access list configuration

## **BCRAN: Building Cisco Remote Access Networks**

**Overview:** KEI Pearson presentation of the Building Cisco Remote Access Networks prepares the student to work in a dial access environment. While the Cisco BCRAN course provides a great deal of exciting and useful information, there are several areas of interest that are not covered, among them are: Virtual Private Networks, using IPSEC, Snapshot Routing, DHCP Services, Backup using floating static routers, Dialer Watch. KEI Pearson Technologies has added in these additional topics to enhance the student's ability to perform required job functions, and material that will assist the students with the Cisco certification process. The material in the KEI Pearson BCRAN course will prepare the student for the BCRAN Cisco certification test.

**Prerequisites:** Students are expected to have completed Cisco's ICND course, as well as have a working knowledge of TCP/IP, Novell, IPX, and AppleTalk prior to enrolling in this class.

**Description:** Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Identifying Cisco Solutions to Remote Access Needs.
- Highlights various physical WAN connections for remote to central site connections.
- Selecting Cisco Products for Remote Connections.

- ADD ON: Discussion of needs for Remote Access and Enabling Technologies.
- Instruct the students on how to establish remote connections via asynchronous links to a centralized router using basic telephone services.
- Configuring Asynchronous Connections to a Central Site with Modems.
- ADD ON: Extensive review of Terminal Operations and Options.
- Configuring PPP and Controlling Network Access with PAP and CHAP.
- Accessing the Central Site with Windows 95.
- How to enhance on-demand connectivity with ISDN technology and configuring an ISDN BRI and ISDN PRI connection.
- Using ISDN and DDR Technologies to Enhance Remote Connectivity.
- ADD ON: SNAPSHOT Routing for Distance Vector Protocols for IP, IPX, AppleTalk.

## **BSCN - Building Scalable Cisco Networks**

**Overview:** The new Building Scalable Cisco Networks, which replaces the Advanced Cisco Router Configuration course, is designed for experienced enterprise network engineers and SEs who require an understanding of the more complex aspects of routing protocol configuration. Topics such as Variable Length Subnet Masking (VLSM), single area and multi-area OSPF, EIGRP, BGP, and redistribution are covered in detail. This instructor-led course guides you through these advanced areas of multiprotocol configuration with a large number of hands-on labs. The class contains much of the advanced routing knowledge you need to pursue your CCIE certification.

**Prerequisites:** It is important to have a good understanding of IP subnetting and access lists, and to be familiar with the operation and configuration of a Cisco router. You must have knowledge comparable to the ICND class material. Experience with the Cisco user interface is a must! Topics with which enrollees

should be familiar include: Internetworking fundamentals and the TCP/IP stack, distance vector routing protocols (RIP and IGRP), static and default route usage and configuration

Standard and extended access lists and frame Relay interface and subinterface configuration

Basic show and debug commands, and routing table analysis.

**Description:** Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Gain hands-on experience with VLSM and advanced interior routing protocols such as OSPF and EIGRP.
- Configure BGP in both single-homed and multi-homed environments, and use route maps to implement policy-based routing.
- Learn techniques to redistribute between different routing protocols, control routing behavior, and achieve redundancy and reliability in a multiprotocol environment.

## **BSCI - Building Scalable Cisco Internetworks**

**Overview:** The new Building Scalable Cisco Internetworks, which replaces the Building Scalable Cisco Networks course, is designed for experienced enterprise network engineers and SEs who require an understanding of the more complex aspects of routing protocol configuration. Topics such as Variable Length Subnet Masking (VLSM), single area and multi-area OSPF, EIGRP, IS-IS, BGP, and redistribution are covered in detail. This instructor/consultant-led course guides you through these advanced areas of multiprotocol configuration with a large number of hands-on labs. The class contains much of the advanced routing knowledge you need to pursue your CCNP, CCIP, CCDP, or CCIE Routing and Switching certification. The course provides the information necessary to pass either the BSCI or the BSCN certification test. In addition, the class contains much of the advanced knowledge you need to pursue your CCIE certification.

BSCI 1.2 is a minor revision to the existing BSCN 1.1 course. The principal enhancement is the addition of a module on Integrated IS-IS, the interior routing protocol of choice among Internet Service Providers, who tend to run IS-IS in conjunction with BGP.

**Prerequisites:** It is important to have a good understanding of IP subnetting and access lists, and to be familiar with the operation and configuration of a Cisco router. You must have knowledge comparable to the ICND class material; CCNA certification is recommended. Experience with the Cisco user interface is a must! Topics with which enrollees should be familiar include: Internetworking fundamentals and the TCP/IP stack, distance vector routing protocols (RIP and IGRP), static and default route usage and configuration, traffic filtering with standard and extended access lists, and frame Relay interface and subinterface configuration, and basic show and debug commands, and routing table analysis.

**Description:** Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Gain hands-on experience with VLSM and advanced interior routing protocols such as EIGRP, OSPF, and IS-IS
- Configure BGP in both single-homed and multi-homed environments, and use route maps to implement policy-based routing
- Learn techniques to redistribute between different routing protocols, control routing behavior, and achieve redundancy and reliability in a multiprotocol environment.

## **CATM - Campus ATM Solutions**

**Overview:** This new course replaces the Cisco ATM Solutions and provides networking professionals with the fundamentals and applications of ATM technology. The course covers the latest developments in ATM technology and teaches students how to configure the Cisco ATM router interfaces, LightStream 1010 ATM Switches, and LAN emulation services.

**Prerequisites:** A solid understanding of TCP/IP networks and bridging concepts. Prior exposure to Cisco IOS software configuration experience is highly recommended; no prior experience with

ATM is required. Various labs are designed to demonstrate the class material; therefore the student should be familiar and comfortable with Cisco router configuration principles as taught in the Introduction to Cisco Router Configuration.

**Description:** Course length: 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Reinforce your learning with hands-on experience with Cisco ATM router interfaces, LAN emulation, and LightStream 1010 ATM Switches.
- Learn ATM fundamentals and underlying principles.
- Receive hands-on experience with the Catalyst 5500 Switch.

## **CIPT - Cisco IP Telephony with Call Manager 3.1**

**Overview:** Cisco IP Telephony (CIPT) provides networking professionals with the fundamentals and applications of Cisco IP Telephony solutions. The course includes phone and gateway installation, configuration, operations, and problem resolution. Students install Cisco Call Manager, Cisco IP Phones, and analog and digital Cisco IP Telephony Access Gateways in a laboratory environment. The course includes exercises that focus on Cisco IP telephony using Cisco Call Manager.

**Prerequisites:** Cisco Certified Network Associate certification, attend Cisco Voice Over Frame Relay, ATM, and IP (CVOICE), and Attend Building Cisco Multi-layer Switched Networks (BCMSN).

**Description:** Course length: 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Use CIPT Products
- Understand Cisco IP Telephony Design Considerations
- Access online documentation

- Use the tools within CIPT for installation, configuration, and problem resolution

## **CIT - Cisco Internetwork Troubleshooting**

**Overview:** This advanced course provides networking professionals with the troubleshooting processes on Cisco routers and Catalyst switches. You will learn to use a standard problem-solving model, and practice-troubleshooting tools provided with the Cisco IOS software to analyze and resolve network problems in TCP/IP and Novell IPX environments, with a strong emphasis on TCP/IP.

**Prerequisites:** Students are expected to have successfully completed Building Scalable Cisco Networks (BSCN) and Building Cisco Multilayer Switched Networks (BCMSN). It is also recommended that you have at least six months of working experience with a Cisco-based router internetwork after completing the above courses. Because this is largely a hands-on methodology course, the technical exploration required is directly related to your experience and knowledge of internetworking in a Cisco router environment.

**Description:** Course length: 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Baseline and troubleshoot an environment using Cisco routers and switches for multiprotocol client hosts and servers connected with the following:
  - Ethernet, Fast Ethernet, and Token Ring LANs.
  - Serial HDLC, PPP, Frame Relay, and ISDN BRI WANs.
  - TCP/IP and Novell NetWare/IPX protocol stacks.
  - Microsoft Networking with Windows 9x/NT.

## **CSPFA - Cisco Secure PIX Firewall Advanced - Cisco Certified**

**Overview:** This new four-day course is constructed to provide students the practical hands-on experience required to configure, maintain and monitor the Cisco Secure Packet Internetworking Exchange (PIX) Firewall. Students will gain mastery of PIX Firewall configuration through a series of 12 labs designed to build familiarity with the PIX's capabilities, while learning the command syntax.

**Prerequisites:** Prior attendance of the Interconnecting Cisco Network Devices (ICND) course is recommended and the Managing Cisco Network Security (MCNS) course is required. Students are expected to have complete knowledge of Cisco Secure Access Control Server (CSACS) and all associate configuration commands.

**Description:** Course length 4 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Understand Network Security Threats and the Security process.
- Knowledge of Cisco Secure PIX Firewall Features and Operation Principles
- How to provide AAA features to and through the PIX Firewall
- Understanding of IPSec and implementation specific configuration for the PIX Firewall.

## **CSVPN - Cisco Secure Virtual Private Networks**

**Overview:** Students will build the requisite skills to secure the network environment using RFC IPSec standards for a total Enterprise VPN solution. Student will deploy the latest VPN technologies, on Cisco VPN 3005 Concentrator, PIX Firewalls and Cisco IOS routers.

**Prerequisites:** Prior attendance of the Interconnecting Cisco Network Devices (ICND) course is recommended and the Managing Cisco Network Security (MCNS) course is required.

**Description:** Course length 4 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Understand RFC standard IPsec protocols and configuration tasks.
- Detailed discussion of Cisco's 3000 Series Concentrator
- IPSEC Configuration Router to Router with both Pre-Shared keys and Certification Authority
- PIX to PIX IPsec VPN configuration
- IPsec Client to IPsec VPN Gateway configuration.

## **CWFUN - CiscoWorks 2000 Fundamentals**

**Overview:** This course provides the student with the skills to install, configure and troubleshoot the foundation components of the CiscoWorks 2000 product family: CiscoWorks 2000 Server, Resource Manager Essentials, and CiscoView. This course will ensure that the student can differentiate product configuration problems from actual network traffic problems through hands-on lab exercises. Also included is a brief overview of all CiscoWorks 2000 products and their role in the marketplace. This course is a pre-requisite to the CiscoWorks 2000 LAN WAN course (CWLAW). The CWLAW course covers Campus Manager (CM), Internetwork Performance Monitor (IPM), and Access List Manager (ACLM). Those who have had the old CEMS course might consider taking CWLAW to update skills using the new Campus Manager, and learn the relatively new ACLM and IPM components as well. Check our web site for when we will be offering it. The remaining CiscoWorks 2000 components are covered by Cisco electronic tutorials.

**Prerequisites:** A basic networking and Cisco background such as that covered in the ICND (Interconnecting Cisco Network Devices) course is highly recommended.

**Description:** Course length 2.5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Learn about the capabilities of each of the many components of CiscoWorks 2000 RWAN and LAN.
- Learn how to install CiscoWorks 2000, and what the system requirements are.

- Learn how to best use CiscoWorks 2000 Server, Resource Manager Essentials, and CiscoView to manage your Cisco router and switch network.
- Gain experience via extensive hands-on labs working with all aspects of CiscoWorks 2000 Server, Resource Manager Essentials, and CiscoView. Each lab pod (2 students) includes: 1 PC, 2 switches, and 1 router. Network core includes larger Cisco switches and router.
- Prepare for Cisco Channel certification.

## **CWLAW - CiscoWorks 2000 LAN/WAN**

**Overview:** This course provides the student with a working knowledge and in-depth hands on experience with Cisco Works 2000's LAN Management Solution and Routed WAN Management Solution bundles. This course will ensure that the student has a comprehensive understanding of, and actual experience with, the following 3 major applications found in the RWAN and LAN Management Solutions bundles: Campus Manager (in LMS), ACL Manager (in RWAN), and Internet Performance Manager (in RWAN).

Campus Manager is a Web-based replacement for the former CWSI product. It provides automatic discovery and viewing of the Layer 2 and 3 topology using CDP. Additional applications include User Tracking, L2 and L3 Path Analysis and VLAN and ATM configuration management. ACL Manager allows you to build a traffic filtering (security) policy or other access list via classes. IPM - Internet Performance Manager provides network personnel with the ability to manage key performance metrics. This application enables network engineers to troubleshoot network-wide performance and diagnose congestion and latency problems utilizing real time and historical statistics. This course is intended for network engineers, network operators, and network administrators who install, configure, and verify Campus Manager, IPM, and ACLM. Those individuals new to CiscoWorks 2000 should consider taking the CWFUN course before enrolling in CWLAW. For experienced RME and CiscoView users, either in the current release of CW2000, or the previous version of CEMS, a direct transition to this

course should pose no major difficulty. The remaining CiscoWorks 2000 components are covered by Cisco electronic tutorials. Note: KEI Pearson also offers the NetScout training course, which essentially covers the Traffic Director component of CiscoWorks 2000.

**Prerequisites:** A basic networking and Cisco background knowledge, such as the material covered in the ICND (Interconnecting Cisco Network Devices) course is highly recommended. In addition, completion of the Cisco CWFUN course, or prior experience with CW2000 RME and CiscoView is necessary.

**Description:** Course length 2.5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Understand the capabilities of each of the many components of CiscoWorks 2000 RWAN and LAN.
- Learn how to install CiscoWorks 2000 Campus Manager, ACL Manager, and IPM - Internet Performance Manager.
- Learn how to best use Campus Manager, ACL Manager and IPM to manage your Cisco router and switch network.
- Gain experience via extensive hands-on labs working with all aspects of CiscoWorks 2000 Campus, ACL manager, and IPM - Internet Performance Manager. Each lab pod (2 students) includes: 1 PC, 2 switches, 1 router and 1 rmon probe. Network core includes larger Cisco switches and routers
- Prepare for Cisco Channel certification.

## **CBCR - Configuring BGP Cisco Routers**

**Overview:** This course introduces the "voice over" technology from Cisco, including both Layer 2 and Layer 3 transports. The course includes a discussion of the fundamentals of telephony and how to configure those telephony functions on a variety of Cisco routers (26xx, 36xx, 53xx, and 3810). Cisco Voice is designed to teach students to connect to a variety of telephony devices and interfaces, from PBXes and Key System Units (KSUs) to incoming T1 spans. Critical case studies

to aid the student in determining the proper solution to various "voice over" scenarios are also included.

**Prerequisites:** Students are expected to have a basic knowledge of data networking theory and principles, to have experience with Cisco's IOS, including both frame-relay and ATM, and to have a basic knowledge of voice technologies.

**Description:** Course length: 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Configure routers for a variety of "voice over" applications and learn to use the built-in troubleshooting tools to solve telephony problems.
- Learn which Cisco products to use when designing a voice solution that packetizes voice traffic.
- Gain an understanding of which telephony equipment serves which function and how to properly connect it to your Cisco network.

## **IPTT: IP Telephony Troubleshooting**

**Overview:** IPTT provides SEs the knowledge and skills required to troubleshoot Enterprise CallManager, Unity, and IP network deployments. IPTT is one of several hands-on courses in a curriculum that addresses both design/planning practices and hands-on experience in configuring, deploying, and troubleshooting AVVID solutions.

**Prerequisites:** Prior to attending this course, students should have attended the following courses. Students with extensive experience in areas covered by these courses will be allowed to waive the prereqs.

- CIPT or AVVID Bootcamp
- QOS
- CVOICE

- ICND
- BCMSN
- CUSE

**Description:** Course length: 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Briefly describe the steps associated with an effective approach to troubleshooting problems
- Identify correct and incorrect flows associated with the following protocols:

§ Skinny

§ H323

§ Q931

§ MGCP

§ DHCP and TFTP

- Identify and resolve problems associated with database synchronization and data exchange between the Publisher and its Subscribers

- Given a set of requirements and an associated dial plan, identify any inconsistencies and potential problem areas

- State when each of the following CCM tools and service aids should be used, and describe the expected output of each:

§ SDI/SDL Traces

§ PerfMon

§ Admin Serviceability Tool

## § Event Viewer

- Given a problem description, use the output from the above tools and service aids identify the source of IP telephony related problems
- Given a problem description and the output from CDR and/or CMR files, identify the source of IP telephony related problems
- Using an external trace tool (e.g., Sniffer or Shomiti software), identify the source of IP telephony related problems
- List router and switch configuration parameters that can affect IP telephony connectivity and/or voice quality
- Run, and interpret the output of, router and switch serviceability related commands (e.g., 'show' commands, 'debug')
- Given an existing CCM installation, analyze bandwidth utilization and identify the appropriate bandwidth management technology (e.g., advanced queuing, compression, packet prioritization) that could be used to eliminate voice quality issues
- Given a problem description associated with a Unity Voice Mail failure, use the appropriate tools and service aids to identify the source of the problem

## **ICND: Interconnecting Cisco Network Devices**

**Overview:** Interconnecting Cisco Network Devices (ICND) includes both routing and switching concepts, covering both Layer 2 and Layer 3 technologies. This course focuses on using Cisco Catalyst switches and Cisco routers connected in local-area networks (LANs) and wide-area networks (WANs) typically found at small to medium network sites. Upon completion of this training course, you will be able to select, connect, configure, and troubleshoot the various Cisco networking devices.

**Prerequisites:** To fully benefit from ICND, you should already possess certain prerequisite skills, which can be gained from completing the Cisco Certified Network Associate (CCNA) Basics CD-ROM or e-learning course or through work experience. The participant should have a working knowledge of the following:

- Commonly used networking terms and topologies
- The basic functions of a network protocol
- Fundamental network device roles (for example, hub, bridge, router, and switch)
- The Open System Interconnection (OSI) reference model
- The use of Windows 95/NT to run multiple applications
- Accessing the Internet or an intranet
- Binary and hexadecimal numbering

**Description:** Course length: 5 days. Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Use the available configuration tools to establish connectivity to the appropriate network device in order to complete the initial device configuration
- Execute an Add, Move, or Change so that the network functions in accordance with the new requirement, given a new network requirement
- Use the command-line interface to accurately determine network operational status and network performance
- Build a functional access switch configuration to support the specified network operational parameters, given a network design
- Use Cisco IOS commands to configure VLANs, VTP, IEEE 802.1Q trunking, and ISL

trunking, given a functioning access layer switch

- Use show and debug commands to identify anomalies in VLAN, VTP, ISL trunking, and Spanning-Tree operation, given an operational access layer switch
- Describe the features and operation of static and dynamic routing, including RIP, IGRP, EIGRP, and OSPF
- Use show and debug commands to identify anomalies in routing operation, given an operational router
- Use Cisco IOS commands to configure standard and extended access lists, given a functioning router
- Use Cisco IOS commands to configure serial interfaces using HDLC and PPP encapsulation for leased line connections, given a functioning router.

### **Who Should Attend:**

- Customers or channel resellers who are new to Cisco products or just entering the internetworking industry
- Network technicians new to Cisco products and services
- Network administrators responsible for implementing and managing small and medium business networks
- Network support staff who will perform a help desk role in a medium or enterprise-sized company that has an internal network support escalation staff
- Network support staff who will act as network device installers and first-line support in a small business environment
- CCNA candidates
- CCNP candidates

# Certified Information System Security Professional

**Overview:** The CISSP Certification was designed to recognize mastery of an international standard for information security and understanding of a Common Body of Knowledge (CBK). Certification can enhance a professional's career and provide added IS credibility. Industry standards, ethics and certification of IS professionals and practitioners becomes critical to ensuring a higher standard for security to be achieved. CISSPs are professionals charged with maintaining, managing, and providing Information Security solutions worldwide.

**Prerequisites:** In order to become CISSP Certified, a candidate must:

- Pass the CISSP exam with a scaled score of 700 points or greater.
- Submit a properly completed and executed Endorsement Form.
- If the candidate is selected for audit, they must successfully pass that audit of their assertions regarding professional experience.

Completion of Security+ or 4 years of experience or 3 years of experience with College Degree.

**Description: Course Length:** 80 hours (lecture & discussions) Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Access Control Systems & Methodology
- Control Techniques
- Access Control Administration
- Identification and Authentication Techniques
- Authorization, Accounting, and Monitoring
- Applications & Systems Development
- Application Environment and Security Controls
- Malicious Code
- The System Life Cycle and Security (cradle to grave)
- Database and Data Warehousing Vulnerabilities
- Business Continuity & Disaster Recovery Planning
- Business Impact Analysis

- Recovery Strategies and Recovery
- Cryptographic Concepts and Cryptanalytic Techniques
- Methods of Encryption
- Key management Techniques
- Digital Signatures
- Message Digests
- Public key Infrastructure (PKI)
- Law, Investigation & Ethics
- Applying Operations Security (Computer) to Daily Activities
- Resource protection
- Administrative Management and Control
- Handling Violations, Incidents, and Breaches
- Physical Security
- Security Architecture & Models
- Theoretical Concepts of Security models
- Components of Information Systems Evaluation Models
- Security Management Practices
- Develop a Security Policy and Plan
- Risk management Concepts
- Evaluation of Personnel Security
- Change Control and Configuration Management
- Telecommunications & Network Security Management
- Establishment of Secure Data and Voice Communications
- Network Architecture and Topologies
- Network Components
- OSI Model
- Firewalls
- Wireless Communications
- Secure Internet, Intranets, Extranets, and E-mail

## Cisco Certified Internetworking Expert

**Overview:** Cisco Certified Internetwork Expert (CCIE) is the most rigorous of Cisco's Career Certifications and identifies the upper echelon of networking experts worldwide. Here at ASM Educational Center, candidates will not only get ready for the CCIE written exam, but also be able to Integrate Cisco Secure PIX Firewall and VPN in an Enterprise Network, Design and install WAN backbones based on Frame-relay and/or ATM, Design and install ISDN for DDR and/or backup to Frame-relay or ATM, Integrate bridging and Layer 2 switching on an Enterprise Network, Use different IP routing protocols to provide end-to-end connectivity in an Enterprise network irrespective of the underlying WAN Topology, Integrate all the above desktop protocols in any Enterprise networks irrespective on the WAN Topology, Perform ATM and Frame-relay Traffic Shaping and QOS, and much more.

**Prerequisites** A firm mastery of Cisco Routing and Switching and a proof of CCNP Certification

Description. **Course length: 80 hours (16hrs. lecture/64hrs. labs)** . Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Integrate Cisco Secure PIX Firewall and VPN in an Enterprise Network
- Design and install WAN backbones based on Frame-relay and/or ATM
- Design and install ISDN for DDR and/or backup to Frame-relay or ATM
- Integrate bridging and Layer 2 switching on an Enterprise Network
- Use different IP routing protocols to provide end-to-end connectivity in an Enterprise network irrespective of the underlying WAN Topology
- Integrate all the above desktop protocols in any Enterprise networks irrespective on the WAN Topology
- Perform ATM and Frame-relay Traffic Shaping and QOS