



Software Skills Training, Inc.

978.250.4983

[www.software-skills-training.com](http://www.software-skills-training.com)

# IT Training Catalog

**Instructor-Led, Hands-On, Training Courses Including:**

**SQL Programming, SQL Server, Business Intelligence**

**ASP.NET, MVC, WPF, WCF, Web Forms, MVC Core, WF**

**HTML5, JavaScript, jQuery, Angular, RWD, Node.js, PHP**

**Java, Java EE, EJB, Spring, Hibernate**

**UNIX/Linux, Shell Programming**

**C/C++ Programming**

*Attend face-to-face in the classroom, remote-live, on-demand or on site at your facility*



# About SST

SST delivers instructor-led technical training across the United States, Canada and the United Kingdom. Whether you attend in person or via remote access, our classroom-based training philosophy zeroes in on your ability to work more productively and with higher quality results after training. Our unparalleled learning environment focuses on four key aspects:

## **Task-Oriented, Cross-Platform Training**

Our courses emphasize task-oriented, not product-oriented training. Because our instructors have cross-platform knowledge and experience, you'll get the full picture – not just how to use a particular tool, but the issues involved in using multiple tools in today's open environments, including practical design, architecture and coding issues.

## **Small Class Sizes, Exceptional Curriculum and Courseware**

Class sizes are kept small in order to provide you with more personalized attention, more focused content, and greater access to instructors for problems and questions. We've built our materials and curriculum to reflect the needs of our students as they have communicated them to us.

## **Many Training Programs to Choose From**

Our extensive offerings include introductory and advanced courses in Java, .NET, SQL, UNIX/Linux, Web Programming, Python, and more. Because we focus on professional programming skills, you'll find a greater selection of advanced training than at most other training centers.

## **Skilled Instructors Who Are Professionals in Their Fields**

In addition to being seasoned professional trainers, our instructors also have many years of training and industry experience working in their respective fields. Practiced developers, software engineers, and system administrators, they understand the challenges you face in your job and have first-hand knowledge of the skills you need to succeed.



# Table of Contents

About SST .....	2
Training Delivery Options.....	7
U.S. Government Employees .....	8
Discount Options.....	9
In-House, Team Training.....	10
Travel Packages .....	11
<b>Introduction to Programming</b>	<b>12</b>
Learning to Program with Java™ .....	13
Learning to Program with C#.....	14
Learning to Program with VB.NET.....	15
Introduction to Visual Basic 6.0.....	16
<b>.NET Programming</b>	<b>17</b>
ASP.NET Web Forms Programming Using C# .....	18
ASP.NET Web Forms Programming Using VB.NET .....	19
ASP.NET Web Forms Programming for Experienced C# Programmers .....	20
ASP.NET Web Forms Programming for Experienced VB.NET Programmers .....	21
ASP.NET MVC Programming Using C# .....	22
ASP.NET MVC Programming Using VB.NET .....	23
ASP.NET MVC Programming for Experienced C# Programmers .....	24
ASP.NET MVC Programming for Experienced VB.NET Programmers .....	25
Introduction to ASP.NET Core MVC .....	26
Windows Forms Programming Using C# .....	27
Windows Forms Programming Using VB.NET .....	28
Windows Forms Programming for Experienced C# Programmers.....	29
Windows Forms Programming for Experienced Visual Basic.NET Programmers.....	30
Windows Presentation Foundation Programming Using C# .....	31
Windows Presentation Foundation Programming Using Visual Basic.NET.....	32
Windows Presentation Foundation Programming for Experienced C# Programmers .....	33
Windows Presentation Foundation Programming for Experienced VB.NET Programmers .....	34

Windows Presentation Foundation Programming Using .NET Core .....	35
WCF Programming Using C# .....	36
WCF Programming for Experienced C# Programmers .....	37
Advanced .NET Framework Programming Using C# .....	38
Advanced .NET Framework Programming Using VB.NET .....	39
Advanced MVC: Building Web Applications Using the ASP.NET Web API with C# .....	40
Advanced MVC: Building Web Applications Using the ASP.NET Web API with VB.NET .....	41
<b>Power BI</b>	<b>42</b>
Analyzing and Presenting Data with Power BI .....	43
Analyzing Data with Power BI, DAX, and Power Query M .....	44
<b>Python Programming</b>	<b>45</b>
Python Programming .....	46
<b>Web Development</b>	<b>47</b>
Website Development with HTML5, CSS and Bootstrap .....	48
JavaScript Programming .....	49
jQuery Programming .....	50
Developing Mobile Websites with Responsive Web Design and jQuery Mobile .....	51
Developing Web Applications Using Angular .....	52
ReactJS Web Application Development .....	53
Node.js Application Development .....	54
Perl Scripting .....	55
PHP Programming .....	56
<b>SQL Programming and SQL Server Administration</b>	<b>57</b>
SQL Programming .....	58
Microsoft Transact-SQL Programming .....	59
SQL Server 2019 Reporting Services .....	60
SQL Server 2019 Business Intelligence Application Development (SSRS, SSIS, SSAS) .....	61
SQL Server 2019 Business Intelligence: Integration Services and Analysis Services .....	62

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Microsoft SQL Server 2017 Administration.....	63
SQL Server 2017 Reporting Services.....	64
SQL Server 2017 Business Intelligence Application Development (SSRS, SSIS, SSAS).....	65
SQL Server 2017 Business Intelligence: Integration Services and Analysis Services.....	66
Microsoft SQL Server 2016 Administration.....	67
SQL Server 2016 Reporting Services.....	68
SQL Server 2016 Business Intelligence Application Development (SSRS, SSIS, SSAS).....	69
SQL Server 2016 Business Intelligence: Integration Services and Analysis Services.....	70
<b>Java Programming</b>	<b>71</b>
Java™ Programming.....	72
Effectively Using Java™ Packages And Features.....	73
Introduction to Web Application Development Using JEE™, Spring/Hibernate, Web Services and AJAX	74
Web Application Development Using Spring, Hibernate and JPA.....	75
Introduction to Spring 5, Spring Boot and Spring REST.....	76
Introduction to Spring 5, Spring MVC and Spring REST.....	77
Introduction to the Spring 5 Framework.....	78
Introduction to Spring Boot 2.....	79
Object Oriented Analysis & Design with UML.....	80
<b>SharePoint</b>	<b>81</b>
SharePoint 2016 Power User.....	82
<b>Unix/Linux</b>	<b>83</b>
UNIX/Linux Fundamentals and Shell Scripting.....	84
Korn Shell and Bash Shell Programming.....	85
Linux System Administration.....	86
<b>C and C++ Programming</b>	<b>87</b>
C Programming.....	88
C++ Programming for C Programmers.....	89
C++ Programming for Non-C Programmers.....	90

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<b>Critical Thinking</b>	<b>91</b>
Critical Thinking for the 21st Century.....	92
<b>Project Management</b>	<b>93</b>
Project Management.....	94
<b>Test-Driven Development (TDD)</b>	<b>95</b>
Test Driven Development (TDD), and Refactoring Legacy Code Using C# .....	96
Test Driven Development (TDD), and Refactoring Legacy Code Using Java .....	97
Terms and Conditions .....	98

# Training Delivery Options

## Face-to-Face in the Classroom

Attend training face-to-face in a classroom-based setting. We offer **more than 100 locations** across the United States, Canada and the United Kingdom. For clients traveling to a course location, SST offers cost effective travel packages.

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## Live via Remote Attendance

SST offers a remote attendance option for students who are not located near a training location and are unable to travel. **Remote access students attend the same live training delivery as students in the classroom and perform hands on exercises using the same equipment at their location.** SST will ship course materials including a PC and audio/video equipment to your home or office. Two-way video and audio communication allows participation as close to “being there” as possible.

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## On-Demand Training

On-demand training allows you to complete courses from any device (PC, phone or tablet) at your own pace. The courses combine video, hands-on lab exercises and one-on-one mentoring to learn as your schedule allows.

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## In-House Group Training

If you're scheduling training for more than 5 or 6 people in your company, you should consider in-house training. **This focused, cost-effective training option can save you 25-30% or more compared to individual tuition prices.** Training at your site allows us to zero in on your specific requirements and, since we own our courseware, there is no extra charge for curriculum adjustments.



Learn  
more

# U.S. Government Employees

Software Skills Training, Inc. (SST) brings 15 years of experience in successfully delivering competency-based IT training programs for thousands of companies, including proven consistent performance within all departments of the government. We offer a unique combination of live and remote attendance for unbeatable flexibility.

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## Delivery Options

**Classroom:** Attend training face-to-face in a classroom-based setting. We offer more than 100 locations across the United States. For clients traveling to a course location, SST offers cost effective travel packages.

**Remote Attendance:** SST offers a remote attendance option for students who are not located near a training location and are unable to travel. Remote access students attend the same live training delivery as students in the classroom and perform hands on exercises using the same equipment at their location. SST will ship course materials including a PC and audio/video equipment to your home or office. Two-way video and audio communication allows participation as close to “being there” as possible.

**Team Training:** If you’re scheduling training for more than 5 or 6 people at your facility, you should consider our in-house, team training option. This focused, cost-effective training option can save you 25-30% or more compared to individual tuition prices. Training at your facility allows us to zero in on your specific requirements and, since we own our courseware, there is no extra charge for curriculum adjustments.

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## SAM Information

DUNS: 180854148

Cage Code: 7EHN0

SAM

NAICS Codes:

511210 Software Publishers

611420 Computer Training

611430 Professional and Management Development Training



# Discount Options

Whether you have a large group to train at one location, or smaller numbers of staff spread throughout the country, SST can prepare a custom discount program that will save you money. If you have a discount program with any other training provider, we will beat it. Call us anytime at 978.250.4983.

**SST provides the most attractive discount opportunities in the industry – without sacrificing flexibility or convenience.** When we structure a program to save you money, you don't have to sacrifice these important qualities!

## Individual Training Pass Options - United States

# Courses	Total Cost	Cost Per Course	% Savings
2	\$3,890	\$1,945	22%
3	\$5,190	\$1,730	31%
4	\$6,390	\$1,598	36%
5	\$7,390	\$1,478	41%
6	\$8,390	\$1,398	44%

If you are interested in taking a 5-day course and 3-day course, SST also offers an 8-day training pass for \$3,290.

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## SST Small Group Discounts

If your company has three or more students interested in attending the same SST class then our small group training discounts could save you as much as fifteen percent off the cost of tuition. **We offer a 10% discount for 3 or 4 students attending the same class on the same date and a 15% discount for 5 or more.**

## In-House, Team Training

If you're scheduling training for more than 5 or 6 people in your company, you should consider in-house training. This focused, cost-effective training option can save you 25-30% or more compared to individual tuition prices. Training at your site allows us to zero in on your specific requirements and, since we own our courseware, there is no extra charge for curriculum adjustments.

**To receive a FREE proposal, follow these steps:**

1. Choose the class you're interested in from our course listings.
2. Estimate the number of students you'd like to train as well as some preferred training dates.
3. Call us at 978.250.4983 to speak with one of our training directors.



## Travel Packages

Students from anywhere in the United States, Canada, Mexico, or Europe can register for a class and **pay an additional \$600 to have SST cover airfare and overnight hotel accommodations** required to attend the class. Call for available dates and locations. Payment for this option must be received by SST 14 days in advance of the class start date. Offer is subject to available airfare.

If airfare is not required students may opt to simply **pay \$300 and SST will cover your overnight hotel accommodations** for up to five nights. Payment for this option must be received at least one business day prior to the start of class.

Call us at **978.250.4983** for more information.



# Introduction to Programming

*Java, C#, VB.NET, Visual Basic 6.0*



# Learning to Program with Java™

**Description:** This hands on Java Programming course provides an introduction to programming using the Java language. Students are introduced to the application development cycle, structure of programs, and specific language syntax. The course introduces important algorithmic constructs, string and character manipulation, dynamic memory allocation, standard I/O, and fundamental object-oriented programming concepts. The course explains the use of inheritance and polymorphism early on so the students can practice extensively in the hands on labs. Structured programming techniques and error handling are emphasized. The course includes the processing of command line arguments and environment variables so students will be able to write flexible, user-friendly programs. Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

**Duration:** 5 days

**Prerequisites:** Familiarity with computers.

**More Info:** [www.software-skills-training.com/Courses/learning-java-programming.htm](http://www.software-skills-training.com/Courses/learning-java-programming.htm)

# Learning to Program with C#

**Description:** This hands on C# programming course provides an introduction to programming using the C# language. Students are introduced to the application development cycle, structure of programs, and specific language syntax. The course also contains "Thinking Like a Programmer" sections that provide students insight on how to develop common algorithms. The course covers console and file I/O, string and character manipulation, managing data using collections and fundamental object-oriented programming concepts. Error handling techniques are also emphasized. The course also introduces how to access databases using ADO.NET and illustrates how to build user interfaces using Windows Forms. Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

**Duration:** 5 days

**Prerequisites:** Familiarity with computers.

**More Info:** [www.software-skills-training.com/Courses/learning-c-sharp-programming.htm](http://www.software-skills-training.com/Courses/learning-c-sharp-programming.htm)

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# Learning to Program with VB.NET

**Description:** This hands on VB.NET programming course provides an introduction to programming using the VB.NET language. Students are introduced to the application development cycle, structure of programs, and specific language syntax. The course also contains "Thinking Like a Programmer" sections that provide students insight on how to develop common algorithms. The course covers console and file I/O, string and character manipulation, managing data using collections and fundamental object-oriented programming concepts. Error handling techniques are also emphasized. The course also introduces how to access databases using ADO.NET and illustrates how to build user interfaces using Windows Forms. Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

**Duration:** 5 days

**Prerequisites:** Familiarity with computers.

**More Info:** [www.software-skills-training.com/Courses/learning-vb-net-programming.htm](http://www.software-skills-training.com/Courses/learning-vb-net-programming.htm)

# Introduction to Visual Basic 6.0

**Description:** This hands on Visual Basic training course provides a thorough introduction to the use of Visual Basic 6. The hands on exercises are focused on solving commonly encountered business problems. The course introduces the Visual Basic Integrated Development Environment (IDE) and its wealth of development tools. Students will learn to build effective user interfaces with Visual Basic controls, forms, and other GUI components. The Visual Basic language is covered in detail. Students will learn the use of the debugging and testing tools available in Visual Studio. Database access is introduced, using Visual Basic's ADO Control and data-aware components like the Data Grid and Data Environment Designer. The course includes an introduction to object-oriented programming techniques, and using the Packaging and Deployment tool to deliver completed applications to end users.

This course provides thorough coverage of the use of Visual Basic 6.0 using Visual Studio 98. Students requiring coverage of Visual Basic.NET using Visual Studio 2005 and later, should attend either the **Learning to Program with VB.NET** or **Windows Forms Programming Using Visual Basic.NET** course instead.

**Duration:** 5 days

**Prerequisites:** Familiarity with computers.

**More Info:** [www.software-skills-training.com/Courses/vb6-training-course.htm](http://www.software-skills-training.com/Courses/vb6-training-course.htm)

# .NET Programming

*C#, VB.NET, ASP.NET  
Web Forms, MVC, MVC  
Core, Windows Forms,  
WF, WPF, WCF*



# ASP.NET Web Forms Programming Using C#

**Description:** This course provides students with hands on experience using Visual Studio to create dynamic Web sites with ASP.NET Web Forms and the .NET Framework using C#. The class provides a thorough introduction to the C# programming language, including coverage of the essentials of the C# programming language, built in data types, operators, control structures, classes and methods, collections and exception handling.

Students then learn how to leverage the power of the .NET Framework to build Web user interfaces. Students will learn use the power of ASP.NET Web server controls combined with HTML5 to design Web pages. They will use ASP.NET Validation controls to provide both client-side and server-side data validation for user input. Students will learn how to use master pages to enforce a consistent look and feel across a set of Web pages, as well as how to use user controls to reuse smaller pieces of HTML across multiple pages.

Students explore the complexities of state management in ASP.NET Web Forms and how to use session and view state objects to manage state between HTTP requests.

Students spend time exploring how to use ADO.NET to interact with databases by running SQL queries and executing stored procedures. They will also learn how to read/write XML files using DataSets and DataTables. Students learn how ASP.NET Web Forms data binding to easily display data in list controls, the GridView control and the DetailsView control.

Microsoft provides support for Ajax-enabled Web Forms applications using the ASP.NET AJAX Framework. Students will learn how to use some of the server-side features to make asynchronous postbacks from the browser, perform partial page updates using the UpdatePanel, use CSS to dim a page during postback and use the Timer fetch data from the server asynchronously.

Other topics include: using a Web.config file to control application configuration; working with the query string; working with cookies; reading and writing files; and deploying ASP.NET web applications. Comprehensive labs provide the students with extensive experience creating and deploying dynamic ASP.NET Web Form applications.

**Duration:** 5 days

**Prerequisites:** Knowledge of fundamental HTML syntax is helpful, but not required. Prior experience with a scripting or programming language is required.

**More Info:** [www.software-skills-training.com/Courses/asp-net-web-forms-programming-course.htm](http://www.software-skills-training.com/Courses/asp-net-web-forms-programming-course.htm)

# ASP.NET Web Forms Programming Using VB.NET

**Description:** This course provides students with hands on experience using Visual Studio to create dynamic Web sites with ASP.NET Web Forms and the .NET Framework using VB.NET. The class provides a thorough introduction to the VB.NET programming language, including coverage of the essentials of the VB.NET programming language, built in data types, operators, control structures, classes and methods, collections and exception handling.

Students then learn how to leverage the power of the .NET Framework to build Web user interfaces. Students will learn use the power of ASP.NET Web server controls combined with HTML5 to design Web pages. They will use ASP.NET Validation controls to provide both client-side and server-side data validation for user input. Students will learn how to use master pages to enforce a consistent look and feel across a set of Web pages, as well as how to use user controls to reuse smaller pieces of HTML across multiple pages.

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Microsoft provides support for Ajax-enabled Web Forms applications using the ASP.NET AJAX Framework. Students will learn how to use some of the server-side features to make asynchronous postbacks from the browser, perform partial page updates using the UpdatePanel, use CSS to dim a page during postback and use the Timer fetch data from the server asynchronously.

Other topics include: using a Web.config file to control application configuration; working with the query string; working with cookies; reading and writing files; and deploying ASP.NET web applications. Comprehensive labs provide the students with extensive experience creating and deploying dynamic ASP.NET Web Form applications.

**Duration:** 5 days

**Prerequisites:** Knowledge of fundamental HTML syntax is helpful, but not required. Prior experience with C# is required.

**More Info:** [www.software-skills-training.com/Courses/learn-asp-net-web-forms.htm](http://www.software-skills-training.com/Courses/learn-asp-net-web-forms.htm)

# ASP.NET Web Forms Programming for Experienced C# Programmers

**Description:** This course provides students with hands on experience using Visual Studio to create dynamic ASP.NET Web Forms applications using C#.

Students will learn use the power of ASP.NET Web server controls combined with HTML5 to design web pages. They will use ASP.NET Validation controls to provide both client-side and server-side data validation for user input. Students will learn how to use master pages to enforce a consistent look and feel across a set of Web pages, as well as how to use user controls to reuse smaller pieces of HTML across multiple pages.

Students explore the complexities of state management in ASP.NET Web Forms and how to use session and view state objects to manage state between HTTP requests.

Students spend time exploring how to use ADO.NET to interact with databases by running SQL queries and executing stored procedures. They will also learn how to read/write XML files using DataSets and DataTables. Students learn how ASP.NET Web Forms data binding to easily display data in list controls, the GridView control and the DetailsView control.

Microsoft provides support for Ajax-enabled Web Forms applications using the ASP.NET AJAX Framework. Students will learn how to use some of the server-side features to make asynchronous postbacks from the browser, perform partial page updates using the UpdatePanel, use CSS to dim a page during postback and use the Timer fetch data from the server asynchronously.

Other topics include: using a Web.config file to control application configuration; working with the query string; working with cookies; reading and writing files; and deploying ASP.NET web applications. Comprehensive labs provide the students with extensive experience creating and deploying dynamic ASP.NET Web Form applications.

**Duration:** 3 days

**Prerequisites:** Knowledge of fundamental HTML syntax is helpful, but not required. Prior experience with C# is required.

**More Info:** [www.software-skills-training.com/Courses/web-application-programming-course.htm](http://www.software-skills-training.com/Courses/web-application-programming-course.htm)

# ASP.NET Web Forms Programming for Experienced VB.NET Programmers

**Description:** This course provides students with hands on experience using Visual Studio to create dynamic ASP.NET Web Forms applications using VB.NET.

Students will learn use the power of ASP.NET Web server controls combined with HTML5 to design web pages. They will use ASP.NET Validation controls to provide both client-side and server-side data validation for user input. Students will learn how to use master pages to enforce a consistent look and feel across a set of Web pages, as well as how to use user controls to reuse smaller pieces of HTML across multiple pages.

Students explore the complexities of state management in ASP.NET Web Forms and how to use session and view state objects to manage state between HTTP requests.

Students spend time exploring how to use ADO.NET to interact with databases by running SQL queries and executing stored procedures. They will also learn how to read/write XML files using DataSets and DataTables. Students learn how ASP.NET Web Forms data binding to easily display data in list controls, the GridView control and the DetailsView control.

Microsoft provides support for Ajax-enabled Web Forms applications using the ASP.NET AJAX Framework. Students will learn how to use some of the server-side features to make asynchronous postbacks from the browser, perform partial page updates using the UpdatePanel, use CSS to dim a page during postback and use the Timer fetch data from the server asynchronously.

Other topics include: using a Web.config file to control application configuration; working with the query string; working with cookies; reading and writing files; and deploying ASP.NET web applications. Comprehensive labs provide the students with extensive experience creating and deploying dynamic ASP.NET Web Form applications.

**Duration:** 3 days

**Prerequisites:** Knowledge of fundamental HTML syntax is helpful, but not required. Prior experience with VB.NET is required.

**More Info:** [www.software-skills-training.com/Courses/asp-net-web-forms-course.htm](http://www.software-skills-training.com/Courses/asp-net-web-forms-course.htm)

# ASP.NET MVC Programming Using C#

**Description:** This course provides students with hands on experience using Visual Studio to create dynamic web applications using ASP.NET MVC and C#. The class provides a thorough introduction to the C# programming language, including coverage of the essentials of the C# programming language, built in data types, operators, control structures, classes and methods, collections and exception handling.

Students learn how to leverage the power of the Model-View-Controller design pattern with the ASP.NET MVC Framework to separate the layers of a web application. Students will use the ASPX and Razor view engines to design a user interface. Students will learn how to build models to manage an application's data layer using both the Entity Framework and LINQ to SQL. And students will learn how to build controllers containing action methods to manage communication between views and models.

Other topics include data scaffolding; URL routing; implementing security; using MVC and Web Forms in the same application, unit testing; and deploying ASP.NET MVC applications. Comprehensive labs provide the students with experience creating, debugging, testing and deploying dynamic ASP.NET MVC applications.

**Duration:** 5 days

**Prerequisites:** Knowledge of fundamental HTML syntax is helpful, but not required. Prior experience with a scripting or programming language is required.

**More Info:** [www.software-skills-training.com/Courses/model-view-controller-classes.htm](http://www.software-skills-training.com/Courses/model-view-controller-classes.htm)

# ASP.NET MVC Programming Using VB.NET

**Description:** This course provides students with hands on experience using Visual Studio to create dynamic web applications using ASP.NET MVC and VB.NET. The class provides a thorough introduction to the VB.NET programming language, including coverage of the essentials of the VB.NET programming language, built in data types, operators, control structures, classes and methods, collections and exception handling.

Students learn how to leverage the power of the Model-View-Controller design pattern with the ASP.NET MVC Framework to separate the layers of a web application. Students will use the ASPX and Razor view engines to design a user interface. Students will learn how to build models to manage an application's data layer using both the Entity Framework and LINQ to SQL. And students will learn how to build controllers containing action methods to manage communication between views and models.

Other topics include data scaffolding; URL routing; implementing security; using MVC and Web Forms in the same application, unit testing; and deploying ASP.NET MVC applications. Comprehensive labs provide the students with experience creating, debugging, testing and deploying dynamic ASP.NET MVC applications.

**Duration:** 5 days

**Prerequisites:** Knowledge of fundamental HTML syntax is helpful, but not required. Prior experience with a scripting or programming language is required.

**More Info:** [www.software-skills-training.com/Courses/learn-mvc-programming.htm](http://www.software-skills-training.com/Courses/learn-mvc-programming.htm)

# ASP.NET MVC Programming for Experienced C# Programmers

**Description:** This course provides students with hands on experience using Visual Studio to create dynamic web applications using ASP.NET MVC and C#. Students should already have a working knowledge of C#.

This course teaches students how to leverage the power of the Model-View-Controller design pattern with the ASP.NET MVC Framework to separate the layers of a web application. Students will use the ASPX and Razor view engines to design a user interface. Students will learn how to build models to manage an application's data layer using both the Entity Framework and LINQ to SQL. Students will also learn how to build controllers containing action methods to manage communication between views and models.

Other topics include data scaffolding; URL routing; implementing security; using MVC and Web Forms in the same application, unit testing; and deploying ASP.NET MVC applications. Comprehensive labs provide the students with experience creating, debugging, testing and deploying dynamic ASP.NET MVC applications.

**Duration:** 3 days

**Prerequisites:** Knowledge of fundamental HTML syntax is helpful, but not required. Prior experience with C# is required.

**More Info:** [www.software-skills-training.com/Courses/mvc-training-course.htm](http://www.software-skills-training.com/Courses/mvc-training-course.htm)

# ASP.NET MVC Programming for Experienced VB.NET Programmers

**Description:** This course provides students with hands on experience using Visual Studio to create dynamic web applications using ASP.NET MVC and VB.NET. Students should already have a working knowledge of VB.NET.

This course teaches students how to leverage the power of the Model-View-Controller design pattern with the ASP.NET MVC Framework to separate the layers of a web application. Students will use the ASPX and Razor view engines to design a user interface. Students will learn how to build models to manage an application's data layer using both the Entity Framework and LINQ to SQL. Students will also learn how to build controllers containing action methods to manage communication between views and models.

Other topics include data scaffolding; URL routing; implementing security; using MVC and Web Forms in the same application, unit testing; and deploying ASP.NET MVC applications. Comprehensive labs provide the students with experience creating, debugging, testing and deploying dynamic ASP.NET MVC applications.

**Duration:** 3 days

**Prerequisites:** Knowledge of fundamental HTML syntax is helpful, but not required. Prior experience with VB.NET is required.

**More Info:** [www.software-skills-training.com/Courses/mvc-framework-training-course.htm](http://www.software-skills-training.com/Courses/mvc-framework-training-course.htm)

# Introduction to ASP.NET Core MVC

**Description:** This course is designed to provide an introduction to .NET Core for programmers who already know the C# language. The course focuses on core portions of the .NET Framework that are common across many application areas. It starts with an introduction to the architecture and key concepts of .NET. The course then discusses class libraries, packages, metapackages and frameworks. Coverage includes working with delegates and events, I/O and serialization, memory management, processes and threads as well as threading and an introduction to the Task Parallel Library (TPL).

This course also provides a practical hands-on introduction to developing Web applications using ASP.NET Core MVC 6 and C#. This Web development framework from Microsoft emphasizes separation of concerns in the architecture and testability of applications. This course covers the fundamentals of the Model-View-Controller design pattern and its implementation in ASP.NET Core MVC. Visual Studio 2019 with ASP.NET Core 3.0 is used as a productive platform for creating MVC Web applications.

After presenting the fundamentals of the technology with several examples, the main components of Model, Controller and View are covered in detail. The discussion of the Model incorporates Microsoft technologies for persisting data, including XML Serialization and ADO.NET with SQL Server 2016. The routing mechanism of ASP.NET MVC is covered. The course includes an introduction to ASP.NET Web API.

Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

**Duration:** 4 days

**Prerequisites:** C# programming experience.

**More Info:** [www.software-skills-training.com/Courses/asp-net-core-mvc-programming-course.htm](http://www.software-skills-training.com/Courses/asp-net-core-mvc-programming-course.htm)

# Windows Forms Programming Using C#

**Description:** This course provides students with hands on experience using Visual Studio to create desktop applications using Windows Forms and the .NET Framework using C#. The course provides a thorough introduction to the C# programming language, including coverage of the essentials of the C# programming language, built in data types, operators, control structures, classes and methods, collections and exception handling.

Students then learn how to leverage the power of the .NET Framework to build desktop applications. Students learn how to build Windows Forms applications and use with a variety of controls to create sophisticated user interfaces. Students also learn how to use the BackgroundWorker to perform asynchronous operations.

Students also learn how to use ADO.NET to interact with databases and XML files. Students learn how Windows Forms uses data binding to display data in controls such as the DataGridView and Chart. Students will also learn how to leverage the power of web services by calling both SOAP services and RESTful APIs.

Other topics include: debugging techniques; using a .config file to control application configuration; building menus, toolbars and status bars; reading and writing files; interacting with the file system; and deploying desktop applications.

Comprehensive labs provide the students with extensive experience creating and deploying Windows Forms-based desktop applications.

**Duration:** 5 days

**Prerequisites:** Prior programming experience is required.

**More Info:** [www.software-skills-training.com/Courses/windows-forms-training-course.htm](http://www.software-skills-training.com/Courses/windows-forms-training-course.htm)

# Windows Forms Programming Using VB.NET

**Description:** This course provides students with hands on experience using Visual Studio to create desktop applications using Windows Forms and the .NET Framework using Visual Basic.NET. The course provides a thorough introduction to the VB.NET programming language, including coverage of the essentials of the VB.NET programming language, built in data types, operators, control structures, classes and methods, collections and exception handling.

Students then learn how to leverage the power of the .NET Framework to build desktop applications. Students learn how to build Windows Forms applications and use with a variety of controls to create sophisticated user interfaces. Students also learn how to use the BackgroundWorker to perform asynchronous operations.

Students learn how to use ADO.NET to interact with databases and XML files. Students learn how Windows Forms uses data binding to display data in controls such as the DataGridView and Chart. Students will also learn how to leverage the power of web services by calling both SOAP services and RESTful APIs.

Other topics include: debugging techniques; using a .config file to control application configuration; building menus, toolbars and status bars; reading and writing files; interacting with the file system; and deploying desktop applications.

Comprehensive labs provide the students with extensive experience creating and deploying Windows Forms-based desktop applications.

**Duration:** 5 days

**Prerequisites:** Prior programming experience is required.

**More Info:** [www.software-skills-training.com/Courses/learn-windows-forms-programming.htm](http://www.software-skills-training.com/Courses/learn-windows-forms-programming.htm)

# Windows Forms Programming for Experienced C# Programmers

**Description:** This course provides students with hands on experience using Visual Studio to create desktop applications using Windows Forms and the .NET Framework using C#. Students should already have a working knowledge of C#.

This course teaches students how to leverage the power of the .NET Framework to build desktop applications. Students learn how to build Windows Forms applications and use with a variety of controls to create sophisticated user interfaces. Students also learn how to use the BackgroundWorker to perform asynchronous operations.

Students also learn how to use ADO.NET to interact with databases and XML files. Students learn how Windows Forms uses data binding to display data in controls such as the DataGridView and Chart. Students will also learn how to leverage the power of web services by calling both SOAP services and RESTful APIs.

Other topics include: debugging techniques; using a .config file to control application configuration; building menus, toolbars and status bars; reading and writing files; interacting with the file system; and deploying desktop applications.

Comprehensive labs provide the students with extensive experience creating and deploying Windows Forms-based desktop applications.

**Duration:** 3 days

**Prerequisites:** Prior experience with C# is required.

**More Info:** [www.software-skills-training.com/Courses/windows-forms-programming.htm](http://www.software-skills-training.com/Courses/windows-forms-programming.htm)

# Windows Forms Programming for Experienced Visual Basic.NET Programmers

**Description:** This course provides students with hands on experience using Visual Studio to create desktop applications using Windows Forms and the .NET Framework using Visual Basic.NET. Students should already have a working knowledge of VB.NET.

This course teaches students how to leverage the power of the .NET Framework to build desktop applications. Students learn how to build Windows Forms applications and use with a variety of controls to create sophisticated user interfaces. Students also learn how to use the BackgroundWorker to perform asynchronous operations.

Students also learn how to use ADO.NET to interact with databases and XML files. Students learn how Windows Forms uses data binding to display data in controls such as the DataGridView and Chart. Students will also learn how to leverage the power of web services by calling both SOAP services and RESTful APIs.

Other topics include: debugging techniques; using a .config file to control application configuration; building menus, toolbars and status bars; reading and writing files; interacting with the file system; and deploying desktop applications.

Comprehensive labs provide the students with extensive experience creating and deploying Windows Forms-based desktop applications.

**Duration:** 3 days

**Prerequisites:** Prior experience with VB.NET is required.

**More Info:** [www.software-skills-training.com/Courses/windows-forms-applications-training.htm](http://www.software-skills-training.com/Courses/windows-forms-applications-training.htm)

# Windows Presentation Foundation Programming Using C#

**Description:** This course provides students with hands on experience using Visual Studio to create Windows Presentation Foundation (WPF) applications using C#. The class provides a thorough introduction to the C# programming language, including coverage of the essentials of the C# programming language, built in data types, operators, control structures, classes and methods, collections and exception handling.

Students then learn how to leverage the power of the .NET Framework to build WPF applications. Students learn the basics of XAML and how to use it to describe the appearance and behavior of WPF user interfaces. Students also learn how to use XAML resources to manage styles, triggers and control templates.

Students learn how use a variety of WPF controls to interact with users and manage data in multi-form applications. Students explore how to leverage the power of XAML data binding. Students also learn the basics of working with images and simple animations.

Students learn how to use their data binding and command skills to implement the MVVM design pattern with WPF applications, including case studies. Students will also learn how to leverage the power of web services by calling both SOAP services and RESful APIs.

Other topics include: debugging techniques; building menus, toolbars and status bars; reading and writing files; and deploying WPF applications. Comprehensive labs and exercises provide the students with extensive experience creating and debugging WPF applications.

**Duration:** 5 days

**Prerequisites:** Knowledge of fundamental XML syntax is helpful, but not required. Prior experience with a scripting or programming language is required.

**More Info:** [www.software-skills-training.com/Courses/wpf-training.htm](http://www.software-skills-training.com/Courses/wpf-training.htm)

# Windows Presentation Foundation Programming Using Visual Basic.NET

**Description:** This course provides students with hands on experience using Visual Studio to create Windows Presentation Foundation (WPF) applications using VB.NET. The class provides a thorough introduction to the VB.NET programming language, including coverage of the essentials of the VB.NET programming language, built in data types, operators, control structures, classes and methods, collections and exception handling.

Students then learn how to leverage the power of the .NET Framework to build WPF applications. Students learn the basics of XAML and how to use it to describe the appearance and behavior of WPF user interfaces. Students also learn how to use XAML resources to manage styles, triggers and control templates.

Students learn how use a variety of WPF controls to interact with users and manage data in multi-form applications. Students explore how to leverage the power of XAML data binding. Students also learn the basics of working with images and simple animations.

Students learn how to use their data binding and command skills to implement the MVVM design pattern with WPF applications, including case studies. Students will also learn how to leverage the power of web services by calling both SOAP services and RESful APIs.

Other topics include: debugging techniques; building menus, toolbars and status bars; reading and writing files; and deploying WPF applications. Comprehensive labs and exercises provide the students with extensive experience creating and debugging WPF applications.

**Duration:** 5 days

**Prerequisites:** Knowledge of fundamental XML syntax is helpful, but not required. Prior experience with a scripting or programming language is required.

**More Info:** [www.software-skills-training.com/Courses/wpf-programming.htm](http://www.software-skills-training.com/Courses/wpf-programming.htm)

# Windows Presentation Foundation Programming for Experienced C# Programmers

**Description:** This course provides students with hands on experience using Visual Studio to create Windows Presentation Foundation (WPF) applications using C#. Students should already have a working knowledge of C#.

This course teaches students how to leverage the power of the .NET Framework to build WPF applications. Students learn the basics of XAML and how to use it to describe the appearance and behavior of WPF user interfaces.

Students also learn how to use XAML resources to manage styles, triggers and control templates.

Students learn how use with a variety of WPF controls to interact with users and manage data in multi-form applications. Students explore how to leverage the power of XAML data binding to build Students also learn the basics of working with images and simple animations.

Students learn how to use their data binding and command skills to implement the MVVM design pattern with WPF applications, including case studies. Students will also learn how to leverage the power of web services by calling both SOAP services and RESful APIs.

Other topics include: building menus, toolbars and status bars; reading and writing files; and deploying WPF applications. Comprehensive labs and exercises provide the students with extensive experience creating and debugging WPF applications.

**Duration:** 3 days

**Prerequisites:** Knowledge of fundamental XML syntax is helpful, but not required. Prior experience with C# is required.

**More Info:** [www.software-skills-training.com/Courses/wpf-application-training-course.htm](http://www.software-skills-training.com/Courses/wpf-application-training-course.htm)

# Windows Presentation Foundation Programming for Experienced VB.NET Programmers

**Description:** This course provides students with hands on experience using Visual Studio to create Windows Presentation Foundation (WPF) applications using VB.NET. Students should already have a working knowledge of VB.NET.

This course teaches students how to leverage the power of the .NET Framework to build WPF applications. Students learn the basics of XAML and how to use it to describe the appearance and behavior of WPF user interfaces.

Students also learn how to use XAML resources to manage styles, triggers and control templates.

Students learn how use with a variety of WPF controls to interact with users and manage data in multi-form applications. Students explore how to leverage the power of XAML data binding to build Students also learn the basics of working with images and simple animations.

Students learn how to use their data binding and command skills to implement the MVVM design pattern with WPF applications, including case studies. Students will also learn how to leverage the power of web services by calling both SOAP services and RESful APIs.

Other topics include: building menus, toolbars and status bars; reading and writing files; and deploying WPF applications. Comprehensive labs and exercises provide the students with extensive experience creating and debugging WPF applications.

**Duration:** 3 days

**Prerequisites:** Knowledge of fundamental XML syntax is helpful, but not required. Prior experience with VB.NET is required.

**More Info:**

[www.software-skills-training.com/Courses/windows-presentation-foundation-training-course.htm](http://www.software-skills-training.com/Courses/windows-presentation-foundation-training-course.htm)

# Windows Presentation Foundation Programming Using .NET Core

**Description:** This course introduces Windows Presentation Foundation (WPF), the .NET technology from Microsoft for building rich Windows applications. WPF includes an XML-based markup language for defining program elements, called Extensible Application Markup Language (XAML). WPF applications can be created using only code or a combination of code and XAML pages. This course covers the essentials of WPF, providing an orientation to this technology and a firm foundation for creating applications in the context of the .NET Core framework. The course utilizes Visual Studio, the C# language, and the latest versions of .NET Core. Comprehensive hands on exercises are integrated throughout the course to reinforce learning and develop real competency.

Windows Presentation Foundation can have a steep learning curve. This course approaches the subject in a practical manner, introducing the student to the fundamentals of creating Windows applications using the features of WPF. It includes coverage of traditional concepts such as controls and also newer concepts such as XAML, flexible layout, logical resources, dependency properties, routed events, and the loosely-coupled command architecture of WPF.

This course is designed to run on .NET Core, an open source and modular implementation of the .NET Framework. As of .NET Core 3.0, it is now very complete and represents the future direction of .NET software from Microsoft, although the classical .NET Frameworks will also continue to be supported.

**Duration:** 3 days

**Prerequisites:** Previous C# programming experience is required. Knowledge of fundamental XML syntax is helpful, but not required.

**More Info:** [www.software-skills-training.com/Courses/wpf-net-core-training-course.htm](http://www.software-skills-training.com/Courses/wpf-net-core-training-course.htm)

# WCF Programming Using C#

**Description:** This course provides students with hands on experience using Visual Studio to create service-oriented applications using Windows Communication Foundation (WCF) and C#. This class provides a thorough introduction to the C# programming language, including coverage of the essentials of the C# programming language, built in data types, operators, control structures, classes and methods. Students then learn how to leverage the power of the .NET Framework to build Web Service applications that interoperate with consumer applications including other platforms and technologies.

Students will learn how to configure addresses, bindings, and service and data contracts as well as how to use various techniques for developing endpoints to allow communication between consumer applications and the web services provider.

The course includes coverage of instance management, fault handling, and security. Students will learn how to use the WCF Routing Service for load balancing, content-based routing, and protocol bridging.

Comprehensive labs and exercises provide the students with experience creating both content server and consumer applications.

**Duration:** 5 days

**Prerequisites:** Prior experience with a scripting or programming language is required.

**More Info:** [www.software-skills-training.com/Courses/learn-wcf-programming.htm](http://www.software-skills-training.com/Courses/learn-wcf-programming.htm)

# WCF Programming for Experienced C# Programmers

**Description:** This course provides students with hands on experience using Visual Studio to create service-oriented applications using Windows Communication Foundation (WCF) and C#. Students learn how to leverage the power of the .NET Framework to build Web Service applications that interoperate with consumer applications including other platforms and technologies. Students will learn how to configure addresses, bindings, and service and data contracts as well as how to use various techniques for developing endpoints to allow communication between consumer applications and the web services provider.

The course includes coverage of instance management, fault handling, and security. Students will learn how to use the WCF Routing Service for load balancing, content-based routing, and protocol bridging.

Comprehensive labs and exercises provide the students with experience creating both content server and consumer applications.

**Duration:** 3 days

**Prerequisites:** Prior experience with C# is required.

**More Info:** [www.software-skills-training.com/Courses/wcf-training-course.htm](http://www.software-skills-training.com/Courses/wcf-training-course.htm)

# Advanced .NET Framework Programming Using C#

**Description:** This hands-on course examines how to utilize advanced features of C# and the .NET Framework in order to build sophisticated, scalable, high-performing applications. The course includes coverage of features available in .NET 2.0 through .NET 4.5.

The course begins by reviewing .NET's Common Type System, and then examines nullable types, inferred types and dynamic data. Advanced object-oriented programming topics include auto-implemented properties, inheritance, abstract classes, sealed classes, and generics, as well as how to implement many of the .NET interfaces in order to take advantage of .NET functionality.

Students learn how to use synchronous and asynchronous delegates to call methods using late binding, as well as how to use delegates to define and fire custom events and manage callbacks. The course shows how to build multithreaded applications and synchronize access to shared resources, including the Thread and ThreadPool classes as well as .NET 4.0's Task class and the Parallel Task Library. Coverage of the new .NET 4.5 Async and Await features is included.

Students learn how to work with data in .NET's collections, as well as how to create and use custom generic methods and collections. Database topics include how to use ADO.NET to manipulate data in databases and how advanced ADO.NET features provide support for transaction management, connection pooling, and the management of disconnected DataSets. Coverage includes how to work with XML documents and make XPath queries.

The course includes the use of LINQ to make queries of data, regardless of its location. Coverage includes using LINQ to Objects, LINQ to SQL, LINQ to DataSets and LINQ to XML, as well as how PLINQ can be used to make efficient queries on large sets of data located in memory.

Students learn about .NET's support for n-tiered application development, including encapsulating functionality in private and shared assemblies. Students also explore how to create and consume WCF services to build distributed systems.

The course includes coverage of attributes and reflection, and how to leverage attributes and reflection to design creative, robust solutions to common design problems.

Comprehensive labs provide students with extensive experience coding with Visual Studio to practice with the topics presented throughout the course.

**Duration:** 5 days

**Prerequisites:** C# programming experience.

**More Info:** [www.software-skills-training.com/Courses/c-sharp-programming.htm](http://www.software-skills-training.com/Courses/c-sharp-programming.htm)

# Advanced .NET Framework Programming Using VB.NET

**Description:** This hands-on course examines how to utilize advanced features of VB.NET and the .NET Framework in order to build sophisticated, scalable, high-performing applications. The course includes coverage of features available in .NET 2.0 through .NET 4.5.

The course begins by reviewing .NET's Common Type System, and then examines nullable types, inferred types and dynamic data. Advanced object-oriented programming topics include auto-implemented properties, inheritance, abstract classes, sealed classes, and generics, as well as how to implement many of the .NET interfaces in order to take advantage of .NET functionality.

Students learn how to use synchronous and asynchronous delegates to call methods using late binding, as well as how to use delegates to define and fire custom events and manage callbacks. The course shows how to build multithreaded applications and synchronize access to shared resources, including the Thread and ThreadPool classes as well as .NET 4.0's Task class and the Parallel Task Library. Coverage of the new .NET 4.5 Async and Await features is included.

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The course includes coverage of attributes and reflection, and how to leverage attributes and reflection to design creative, robust solutions to common design problems.

Comprehensive labs provide students with extensive experience coding with Visual Studio to practice with the topics presented throughout the course.

**Duration:** 5 days

**Prerequisites:** VB.NET programming experience.

**More Info:** [www.software-skills-training.com/Courses/vb-net-programming.htm](http://www.software-skills-training.com/Courses/vb-net-programming.htm)

# Advanced MVC: Building Web Applications Using the ASP.NET Web API with C#

**Description:** This course provides students with the skills needed to create sophisticated web applications using advanced features of ASP.NET MVC, the Entity Framework, Web API, and the popular JavaScript libraries jQuery, jQuery UI, Bootstrap and AngularJS. Students will build several ASP.NET MVC web applications using Visual Studio during the week to reinforce the skills they learn.

The course begins with an overview of ASP.NET MVC for experienced programmers and then covers the fundamentals of responsive website design. Students then learn how to use Bootstrap with MVC to make a web site responsive on devices from large desktop displays to small mobile devices.

Students will learn how to integrate jQuery into an MVC application to provide dynamic, client-side behavior. They will then learn how to use jQuery's Ajax features to build more interactive MVC applications. Students will also learn how to use jQuery UI widgets to provide a more sophisticated user interface for their MVC views.

The course covers use of the Entity Framework to provide a data access layer for an MVC application. The Database First strategy is briefly examined before thorough coverage of the more configurable Code First strategy. Students will also learn how to use the Web API to build APIs that expose services and data via HTTP. These APIs can be used by a diverse set of clients including browsers, desktop applications and mobile devices.

The course includes coverage of Single-Page Applications. In these types of applications, the entire page is loaded in the browser after the initial request. All other interactions with the server utilize Ajax requests to update the page. The service layer is implemented with the Web API.

Additional topics include: using HTML helpers to design views; creating both inline and custom HTML helpers to encapsulate view markup; using convention-based and attribute routing to support custom routes; and use of the NuGet packages with MVC applications.

**Duration:** 5 days

**Prerequisites:** Prior experience building ASP.NET MVC web sites. Students who are not familiar with ASP.NET MVC or C# should take the *ASP.NET MVC Programming Using C#* course instead.

**More Info:** [www.software-skills-training.com/Courses/web-api-training-course.htm](http://www.software-skills-training.com/Courses/web-api-training-course.htm)

# Advanced MVC: Building Web Applications Using the ASP.NET Web API with VB.NET

**Description:** This course provides students with the skills needed to create sophisticated web applications using advanced features of ASP.NET MVC, the Entity Framework, Web API, and the popular JavaScript libraries jQuery, jQuery UI, Bootstrap and AngularJS. Students will build several ASP.NET MVC web applications using Visual Studio during the week to reinforce the skills they learn.

The course begins with an overview of ASP.NET MVC for experienced programmers and then covers the fundamentals of responsive website design. Students then learn how to use Bootstrap with MVC to make a web site responsive on devices from large desktop displays to small mobile devices.

Students will learn how to integrate jQuery into an MVC application to provide dynamic, client-side behavior. They will then learn how to use jQuery's Ajax features to build more interactive MVC applications. Students will also learn how to use jQuery UI widgets to provide a more sophisticated user interface for their MVC views.

The course covers use of the Entity Framework to provide a data access layer for an MVC application. The Database First strategy is briefly examined before thorough coverage of the more configurable Code First strategy. Students will also learn how to use the Web API to build APIs that expose services and data via HTTP. These APIs can be used by a diverse set of clients including browsers, desktop applications and mobile devices.

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Additional topics include: using HTML helpers to design views; creating both inline and custom HTML helpers to encapsulate view markup; using convention-based and attribute routing to support custom routes; and use of the NuGet packages with MVC applications.

**Duration:** 5 days

**Prerequisites:** Prior experience building ASP.NET MVC web sites. Students who are not familiar with ASP.NET MVC or VB.NET should take the *ASP.NET MVC Programming Using VB.NET* course instead.

**More Info:** [www.software-skills-training.com/Courses/advanced-mvc-training-course.htm](http://www.software-skills-training.com/Courses/advanced-mvc-training-course.htm)

# Power BI



# Analyzing and Presenting Data with Power BI

**Description:** This course provides an in-depth introduction to Microsoft's Power BI suite of products. Students will learn to use the Power BI Desktop and Power BI online service to import, analyze, and visualize business data, and to share business intelligence. The course starts with an exploration of the evolution of relational databases, data warehouse and business intelligence. Later topics include importing and combining data from diverse data sources, shaping and transforming data, and modeling data. Students will develop useful and insightful data visualizations, and create and share reports and dashboards in the Power BI service. Students will learn about collaborating in the Power BI service, and will also gain an introduction to Data Analysis Expressions (DAX).

Students wanting in-depth coverage of DAX and Power Query M in addition to Power BI training should instead attend the **Analyzing Data with Power BI, DAX, and Power Query M** course rather than this course.

**Duration:** 3 days

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

- High degree of computer literacy
- Experience with office applications
- Familiarity with spreadsheet functionality
- An understating of fundamental business analysis issues such as revenue, profitability, financial accounting, and reporting
- Basic familiarity with relational databases and data warehousing is helpful but not required

**More Info:** [www.software-skills-training.com/Courses/analyzing-data-power-bi-training.htm](http://www.software-skills-training.com/Courses/analyzing-data-power-bi-training.htm)

# Analyzing Data with Power BI, DAX, and Power Query M

**Description:** This course provides a robust and in-depth introduction to Microsoft's Power BI suite of products and gives students a solid understanding of data analysis with Power BI, DAX, and Power Query M. Students will learn to use the Power BI Desktop and Power BI online service to import, analyze, and visualize business data, and to share business intelligence. In addition, students will learn beginner and intermediate techniques for adding calculations to their Power BI Data models using DAX, as well as how to use the Power Query M language to write advanced queries in order to populate a data model from external data sources.

The course starts with an exploration of the evolution of relational databases, data warehouse and business intelligence. Afterwards, students dive into topics such as the importing and combining of data from diverse data sources, shaping and transforming data, modeling data, developing useful and insightful visualizations, creating and sharing reports and dashboards in the Power BI service, and collaborating in the Power BI service. Additional topics include the use of DAX to solve common data modelling problems, how to flatten out an OLTP database into a star schema by using DAX, resolving common granularity issues with data models, and using Measures to solve advanced calculation problems that languages like SQL are unable to tackle.

Students who want Power BI training but do not need detailed coverage of DAX and Power Query M should instead attend the **Analyzing and Presenting Data with Power BI** course rather than this course.

**Duration:** 5 days

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

- High degree of computer literacy
- Experience with office applications
- Familiarity with spreadsheet functionality
- An understating of fundamental business analysis issues such as revenue, profitability, financial accounting, and reporting
- Basic familiarity with relational databases and data warehousing is helpful but not required

**More Info:** [www.software-skills-training.com/Courses/power-bi-dax-power-query-m-training.htm](http://www.software-skills-training.com/Courses/power-bi-dax-power-query-m-training.htm)

# Python Programming



# Python Programming

**Description:** This hands on Python programming course shows how to rapidly develop and maintain effective Python programs. The course includes thorough coverage of Python syntax, built in data types and control constructs. The course takes a practical approach to creating and organizing Python programs using functions, packages, modules and classes as part of Python's object-oriented paradigm. Attendees will use regular expressions to rapidly process data captured from users and from the file system.

Attendees will learn how to use Python to create scripts that manipulate data, automate tasks, perform error handling and store and retrieve data by using relational databases. Students will be able to create Python scripts that assist with system administration.

Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

**Duration:** 4 days

**Prerequisites:** Prior scripting experience or knowledge of fundamental programming concepts.

**More Info:** [www.software-skills-training.com/Courses/python-programming-training-course.htm](http://www.software-skills-training.com/Courses/python-programming-training-course.htm)

*Surprised by how good the remote attendance experience was. Felt like I got the full benefit of the course without the difficulty of travel.*

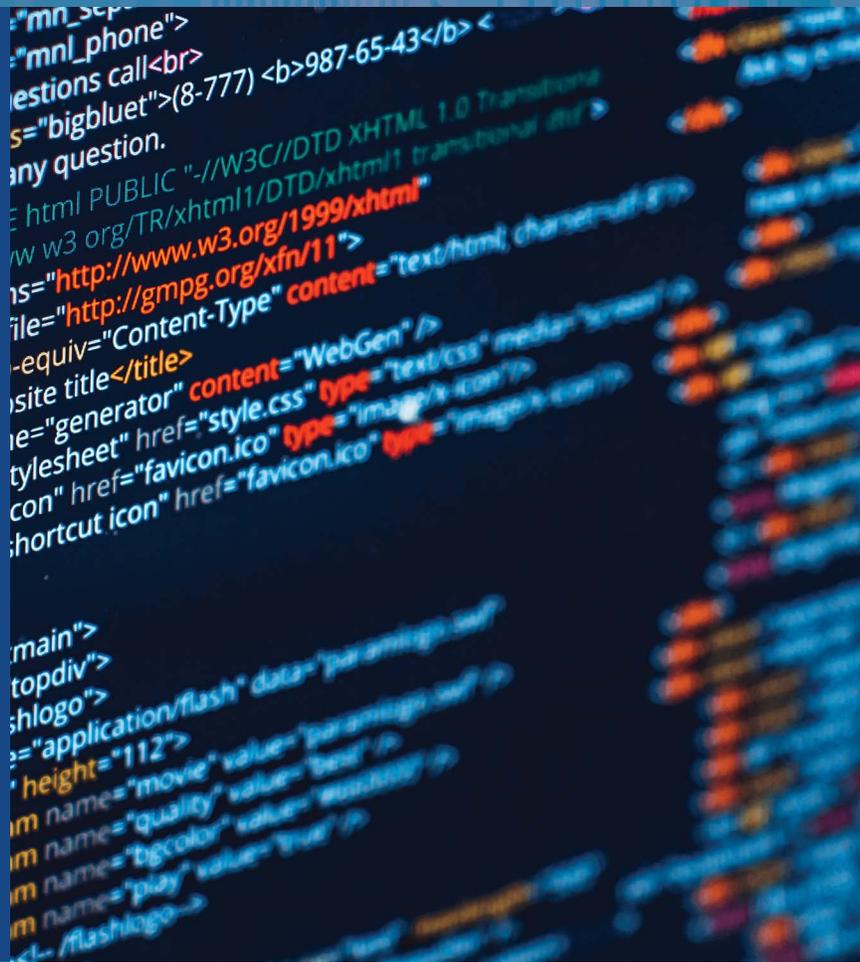
- T.O.

*Thank you so much for this experience! I definitely learned a lot and feel so much more equipped to tackle my job.*

- D.H.

# Web Development

*HTML5, JavaScript,  
jQuery, Angular, Node.js,  
RWD, PHP, Perl*



# Website Development with HTML5, CSS and Bootstrap

**Description:** This hands on course provides a thorough introduction into the creation of a Website using HTML, CSS and Bootstrap. The course starts with thorough coverage of HTML and Cascading Style Sheets (CSS) and progresses to using the Bootstrap framework to create mobile-friendly websites.

Topics include use of HTML5 semantic tags, block-level and inline elements, creating links, ordered and unordered lists, creation of tables and forms. Students will learn to attach CSS to a page using several different techniques, CSS selectors and pseudo-classes, CSS box model, and a variety of CSS properties.

Students will learn how to create a Bootstrap page utilizing the grid system, implement commonly used components (such as dropdowns and navigation bars), use Bootstraps CSS classes to format page elements and use Bootstrap's plugins to add tabs, modals and accordions to a page.

Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

**Duration:** 5 days

**Prerequisites:** Basic personal computer skills and basic Internet knowledge.

**More Info:** [www.software-skills-training.com/Courses/html5-bootstrap-programming-course.htm](http://www.software-skills-training.com/Courses/html5-bootstrap-programming-course.htm)

# JavaScript Programming

**Description:** JavaScript is a scripting language that is commonly used to create and control dynamic Website content along with its use in the Node.js runtime. This hands on JavaScript training course provides the fundamental knowledge necessary to design and develop dynamic Web pages using JavaScript and to be able to grasp JavaScript libraries and frameworks such as jQuery, React and Angular. Students will learn the syntax of the JavaScript language and how to use JavaScript in a Web browser.

Topics include ways to declare variables, use of intrinsic JavaScript objects such as Math, Date and Array, declaring and calling functions, defining custom objects, error handling, working with arrow functions, and using conditional logic. Students will learn how to include JavaScript in a Web page and how to use browser-based APIs such as the Document Object Model (DOM), Geolocation and Web Storage. Upon completion students will be able to utilize event handling, form validation, JSON and Ajax.

Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

**Duration:** 5 days

**Prerequisites:** Basic computer skills and knowledge of HTML fundamentals including use of Cascading Style Sheets. Students who are not familiar with HTML should register for the **Website Development with HTML5, CSS and Bootstrap** course.

**More Info:** [www.software-skills-training.com/Courses/javascript-course.htm](http://www.software-skills-training.com/Courses/javascript-course.htm)

# jQuery Programming

**Description:** This hands-on course covers the jQuery library, DOM manipulation, performing Ajax requests, and an overview of the UI library. Students will also learn how to use the jQuery function to return a wrapped set of elements, use utility functions to work with arrays and strings, modify the appearance of elements using a number of predefined effects as well as how to implement existing plugins.

Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

**Duration:** 3 days

**Prerequisites:** Knowledge of HTML, CSS and JavaScript equivalent to attending the **Website Development with HTML5, CSS and Bootstrap** and **JavaScript Programming** courses.

**More Info:** [www.software-skills-training.com/Courses/jquery-training-course.htm](http://www.software-skills-training.com/Courses/jquery-training-course.htm)

# Developing Mobile Websites with Responsive Web Design and jQuery Mobile

**Description:** This hands-on course conveys the fundamental skills necessary to design and build responsive web sites for mobile devices such as phones and tablets. Attendees will use responsive web design (RWD) techniques such as CSS3 media queries and flexible layouts to build mobile-compatible web sites. Students will learn how to test mobile websites using emulators and simulators.

The course also provides an extensive introduction into using the jQuery Mobile Framework for building mobile-specific web sites. Students will learn how to use jQuery Mobile widgets to create forms, lists, toolbars and collapsible blocks. Students will also learn how to integrate SOA with a mobile web site including working with RSS feeds, Google Maps integration and implementing server-side data access.

Attendees will use ThemeRoller for jQuery Mobile to download existing or custom theme swatches to format the appearance of a web site. Additional topics include responding to user events, configuring jQuery Mobile defaults and using page transitions. Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

**Duration:** 5 days

**Prerequisites:** Prior knowledge of HTML, CSS, JavaScript and jQuery equivalent to attending the **Website Development with HTML5, CSS and Bootstrap, JavaScript Programming and jQuery Programming** courses.

**More Info:** [www.software-skills-training.com/Courses/jquery-mobile-training-course.htm](http://www.software-skills-training.com/Courses/jquery-mobile-training-course.htm)

# Developing Web Applications Using Angular

**Description:** This course introduces Angular versions 2 through 9.

This hands on programming course provides a thorough introduction to the Angular JavaScript Framework including coverage of versions 2 through 9. Attendees will learn the fundamental skills necessary to build Web Applications using Angular and the MVVM (Model-View-ViewModel) design pattern. Topics include using TypeScript and ECMAScript 6 to create object-oriented Angular applications, extending HTML by creating reusable UI components, implementing data-binding, designing and using custom structural and attribute directives, as well as creating and using Angular pipes for formatting and transforming data in the UI. Students will explore creating UX's (User Experiences) by designing Web animations and implementing both template-driven and reactive style forms. Students will learn to use Angular routing to create SPA's (Single Page Applications). The course includes coverage of using DI (Dependency Injection) and Angular services to provide business and data-access logic to the application, both locally as well as communicating with RESTful web services to provide CRUD database operations.

Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

**Duration:** 5 days

**Prerequisites:** Knowledge of HTML, CSS and JavaScript equivalent to attending the **Website Development with HTML5, CSS and Bootstrap** and **JavaScript Programming** courses. Knowledge of jQuery is helpful, but not required.

**More Info:** [www.software-skills-training.com/Courses/angular-training-course.htm](http://www.software-skills-training.com/Courses/angular-training-course.htm)

# ReactJS Web Application Development

**Description:** React (a.k.a. ReactJS or React.js) is a popular component-based JavaScript library used for easy creation of powerful, interactive UIs. This React training course will provide an introduction to the benefits of the React JavaScript framework, so course participants can start to develop applications quickly using the framework.

Students will be introduced to the React JavaScript library and covers essentials such as using Create React App, defining components, writing and styling JSX elements, passing props, using state and registering event handlers. Students will also learn how to use React Hooks, the Context API, Lifecycle Methods and how to implement global state using the Redux JavaScript library.

Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

**Duration:** 4 days

**Prerequisites:** Knowledge of HTML and JavaScript equivalent to attending the **Website Development with HTML5, CSS and Bootstrap** and **JavaScript Programming** courses.

**More Info:** [www.software-skills-training.com/Courses/react-web-application-dev-course.htm](http://www.software-skills-training.com/Courses/react-web-application-dev-course.htm)

# Node.js Application Development

**Description:** This hands on Node.js course will teach front end designers and server side developers how to rapidly create, maintain, and deploy Node.js applications. This course includes thorough coverage of the Node.js architecture, the V8 engine and the Node Ecosystem. The course takes a practical approach to creating and organizing Node.js applications using functions and modules as part of the Node.js organizational structure. This course will provide attendees with a comprehensive understanding of Node.js core modules and how to procure and install packages using npm. Attendees will learn to identify and correct problems through unit testing and exception handling.

Attendees will learn how to use Node.js to create Command Line Interface applications for system administration and process management, use Node.js networking modules to communicate with TCP/IP clients and servers such as HTTP servers, and create / consume REST (Representational State Transfer) data services. Attendees will learn how to leverage frameworks such as Express to rapidly build Web Applications. Attendees will learn how to use Node.js to connect to NoSQL databases such as MongoDB to store, retrieve, and manipulate data (i.e., achieve data persistence).

Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

**Duration:** 4 days

**Prerequisites:** Knowledge of JavaScript equivalent to attending the **JavaScript Programming** course. Attendees should also have familiarity with a Windows, Linux, or OS X command line interface as well as a basic understanding of network protocols such as HTTP.

**More Info:** [www.software-skills-training.com/Courses/node-js-web-application-training-course.htm](http://www.software-skills-training.com/Courses/node-js-web-application-training-course.htm)

# Perl Scripting

**Description:** This hands-on Perl Programming course presents a thorough introduction to the Perl scripting language emphasizing the rapid development of portable and modular Perl programs and scripts. Students are introduced to all major language elements including built-in data types, powerful operators, flow control and robust built-in functions. The course also covers the use of command line processing, file and directory I/O to create flexible and user friendly programs. Attendees will also be introduced to object-oriented programming in Perl as well as how to use pattern matching with Regular Expressions and string handling functions to manipulate files and data. Students will learn to create reusable code using subroutines, modules, and Perl's object-oriented architecture to deploy business logic across many programs and scripts to enhance maintainability and scalability.

Students will also learn to use the DBI Perl module to write programs that provide a consistent database interface independent of the actual database being used. Comprehensive hands on exercises will be completed throughout the course to reinforce key concepts and practice debugging techniques. Students are shown how to extend Perl's basic functionality with packages and loadable modules.

**Duration:** 4 days

**Prerequisites:** Prior scripting experience or knowledge of fundamental programming concepts.

**More Info:** [www.software-skills-training.com/Courses/perl-programming-course.htm](http://www.software-skills-training.com/Courses/perl-programming-course.htm)

# PHP Programming

**Description:** This hands on PHP Programming course provides the knowledge necessary to design and develop dynamic, database-driven Web pages using PHP 7. PHP is a language written for the Web, quick to learn, easy to deploy and provides substantial functionality required for e-commerce. This course introduces the PHP framework and syntax and covers in depth the most important techniques used to build dynamic Web sites. Students learn how to connect to any modern database, and perform hands on practice with a MySQL database to create database-driven HTML forms and reports.

E-commerce skills including user authentication, data validation, dynamic data updates, and shopping cart implementation are covered in detail. Course elements include implementing RESTful servers for newer, more data-driven sites. Students also learn how to configure PHP and an IIS Web Server.

Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

**Duration:** 5 days

**Prerequisites:** Basic computer skills and knowledge of HTML fundamentals equivalent to attending the **Website Development with HTML5, CSS and Bootstrap** course. Prior programming experience is helpful but not required.

**More Info:** [www.software-skills-training.com/Courses/php-training.htm](http://www.software-skills-training.com/Courses/php-training.htm)

# SQL Programming and SQL Server Administration



# SQL Programming

**Description:** This SQL programming course teaches students relational database fundamentals and SQL programming skills. Topics covered include relational database architecture, database design techniques, and simple and complex query skills. This class is intended for analysts, developers, designers, administrators, and managers new to the SQL programming language. Upon completion, participants will understand SQL functions, join techniques, database objects and constraints, and will be able to write useful SELECT, INSERT, UPDATE and DELETE statements. Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

**Duration:** 3 days

**Prerequisites:** General computer knowledge. Familiarity with relational database concepts is helpful but not required.

**More Info:** [www.software-skills-training.com/Courses/sql-programming.htm](http://www.software-skills-training.com/Courses/sql-programming.htm)

# Microsoft Transact-SQL Programming

**Description:** This Transact-SQL programming course teaches students relational database fundamentals and SQL programming skills in the Microsoft SQL Server environment. Topics covered include relational database architecture, database design techniques, and simple and complex query skills. The course also covers Microsoft-specific T-SQL programming constructs, creation and use of stored procedures and user-defined functions, use of cursors and updateable views.

This class is intended for analysts, developers, designers, administrators, and managers new to the SQL programming language. Upon completion, participants will understand SQL functions, join techniques, database objects and constraints, and will be able to write useful stored procedures and views as well as complex queries and updates. Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

**Duration:** 5 days

**Prerequisites:** General computer knowledge. Familiarity with relational database concepts is helpful but not required.

**More Info:** [www.software-skills-training.com/Courses/transact-sql-programming.htm](http://www.software-skills-training.com/Courses/transact-sql-programming.htm)

# SQL Server 2019 Reporting Services

**Description:** This course introduces Microsoft's SQL Server Reporting Services 2019 (SSRS) utility. All reports are developed utilizing SQL Server Data Tools (SSDT), however Report Designer is also introduced. Students will complete hands-on exercises creating a number of reports including table-based, cross tabular and forms based designs. Reports utilizing charts, gauges, KPIs, spark lines, data bars and tree maps will be built. Exercises will incorporate the use of report parameters and features such as drill down, interactive sorting, hyperlinks, book marks and report maps.

Consuming data from relational, multi-dimensional and tabular data sources will be incorporated into report designs. Students will become familiar with report deployment to the new Reporting Service Web Portal and learn how to use portal the management tools to configure report caches, snapshots and subscriptions. Instruction and practice in designing report security to insure protection of enterprise data will be provided.

The student will gain experience with the new Report Services Web portal, which enables publishing content other than paginated reports, such as Excel and Power BI. Students will also learn how to include KPIs (Key Performance Indicators) directly from a shared data set.

Students who wish to attend 2-day coverage of SSIS and SSAS in addition to 3 days of SSRS coverage, should instead sign up for the 5-day **SQL Server 2019 Business Intelligence Application Development (SSRS, SSIS, SSAS)** course. The **SQL Server 2019 Business Intelligence Application Development (SSRS, SSIS, SSAS)** course covers everything in the SQL Server 2019 Reporting Services course, plus a 1-day overview each for Integration Services and Analysis Services.

Students requiring more in-depth coverage of SSIS and SSAS, as well as SSRS coverage should attend the 3-day SQL Server 2019 Reporting Services course followed by the 5-day **SQL Server 2019 Business Intelligence: Integration Services and Analysis Services** course, which provides 5-days of coverage for SSIS and SSAS capabilities.

**Duration:** 3 days

**Prerequisites:** Familiarity with database concepts, Windows desktop navigation and Transact-SQL. Attendance at our **Microsoft Transact-SQL Programming** course is highly recommended although not required.

**More Info:** [www.software-skills-training.com/Courses/ssrs-training-course-2019.htm](http://www.software-skills-training.com/Courses/ssrs-training-course-2019.htm)

# SQL Server 2019 Business Intelligence Application Development (SSRS, SSIS, SSAS)

**Description:** This hands-on course introduces the SQL Server 2019 Business Intelligence Suite, including Reporting Services (SSRS), Integration Services (SSIS) and Analysis Services (SSAS). Students will complete hands-on exercises creating a number of reports including table-based, cross tabular and forms based designs. Reports utilizing charts, gauges, KPIs, spark lines, data bars and tree maps will be built. Exercises will incorporate the use of report parameters and features such as drill down, interactive sorting, hyperlinks, book marks and report maps.

Consuming data from relational, multi-dimensional and tabular data sources will be incorporated into report designs. Students will become familiar with report deployment to the Reporting Service Web Portal and learn how to use portal the management tools to configure report caches, snapshots and subscriptions. Instruction and practice in designing report security to insure protection of enterprise data will be provided.

Students will gain experience with the Report Services Web portal, which enables publishing content other than paginated reports, such as Excel and Power BI. Students will also learn how to include KPIs (Key Performance Indicators) directly from a shared data set.

One day is reserved for SQL Server Integration Services (SSIS). Students will learn the basics of creating SSIS packages using SQL Server Data Tools to create Extract Transform and Load solutions used to populate data warehouses and marts.

In the final day, based on a populated data warehouse they have created, students will then learn how to develop an SQL Server Analysis Services (SSAS) multidimensional (cube) model using Multidimensional Expressions (MDX) syntax. Cubes will be customized to include Key Performance Indicators (KPIs), Calculated Members, Named Sets, Navigational Hierarchies, and Perspectives. Also, a brief introduction to the SSAS Tabular module will be provided.

Students only interested in SSRS coverage should sign up for the 3-day **SQL Server 2019 Reporting Services** course.

Students interested in SSRS coverage and extended coverage of SSIS and SSAS should instead sign up for the **SQL Server 2019 Reporting Services** course followed by the **SQL Server 2019 Business Intelligence: Integration Services and Analysis Services** course, which provides 5-days of coverage for SSIS and SSAS capabilities.

**Duration:** 5 days

**Prerequisites:** Familiarity with database concepts, Windows desktop navigation and Transact-SQL. Attendance at our **Microsoft Transact-SQL Programming** course is highly recommended although not required.

**More Info:** [www.software-skills-training.com/Courses/sql-server-2019-ssrs-ssis-ssas-training.htm](http://www.software-skills-training.com/Courses/sql-server-2019-ssrs-ssis-ssas-training.htm)

# SQL Server 2019 Business Intelligence: Integration Services and Analysis Services

**Description:** SQL Server 2019 provides a rich environment for business intelligence development. The focus of this course is to familiarize developers with the use of the SQL Server Database Engine, SQL Server Integration Services (SSIS), and SQL Server Analysis Services (SSAS) for business intelligence purposes. Students will design an OLAP database utilizing a star schema (Data Warehouse), and then populate it using ETL routines designed in SSIS. After the data warehouse has been populated, SSAS will be used to build both Multidimensional and Tabular models that will serve as reporting data sources.

Students will learn how to design and build data warehouses and marts using SQL Server Management Studio. In a series of exercises, students develop SSIS packages designed to maintain a data warehouse using the Data Flow control flow task. Also demonstrated are other control flow tasks that can interact with an NTFS file system, FTP server, execute Win32 processes, send emails, and run .NET scripts.

Based on the populated data warehouse they have created, students will then learn how to develop both Multidimensional and Tabular SSAS models using the languages Multidimensional Expressions (MDX) and Data Analysis Expressions (DAX). Cubes will be customized to include Key Performance Indicators (KPIs), Calculated Members, Named Sets, Navigational Hierarchies, and Perspectives.

**Duration:** 5 days

**Prerequisites:** Familiarity with database concepts, Windows desktop navigation and software installation techniques. Attendance at our **SQL Programming** course or **Microsoft Transact-SQL Programming** course is highly recommended although not required.

**More Info:** [www.software-skills-training.com/Courses/sql-server-2019-ssis-ssas-training.htm](http://www.software-skills-training.com/Courses/sql-server-2019-ssis-ssas-training.htm)

# Microsoft SQL Server 2017 Administration

**Description:** This hands-on course provides students with the knowledge and skills to administer a SQL Server 2017 database infrastructure. You will learn how to install, configure, manage, secure, automate, monitor, and optimize SQL Server 2017. You will also learn how to create, manage, back up, and restore individual databases, transfer and replicate data, configure for high availability, and plan disaster recovery.

Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency, including a highlight final exercise where students perform an actual failover between two SQL Server machines.

**Duration:** 5 days

**Prerequisites:** Familiarity with database concepts, Windows desktop navigation and Transact-SQL. Attendance at our **Microsoft Transact-SQL Programming** course is highly recommended although not required.

**More Info:**

[www.software-skills-training.com/Courses/sql-server-2017-administration-training-course.htm](http://www.software-skills-training.com/Courses/sql-server-2017-administration-training-course.htm)

# SQL Server 2017 Reporting Services

**Description:** This course introduces Microsoft's SQL Server Reporting Services 2017 (SSRS) utility. All reports are developed utilizing SQL Server Data Tools (SSDT), however Report Designer is also introduced. Students will complete hands-on exercises creating a number of reports including table-based, cross tabular and forms based designs. Reports utilizing charts, gauges, KPIs, spark lines, data bars and tree maps will be built. Exercises will incorporate the use of report parameters and features such as drill down, interactive sorting, hyperlinks, book marks and report maps.

Consuming data from relational, multi-dimensional and tabular data sources will be incorporated into report designs. Students will become familiar with report deployment to the new Reporting Service Web Portal and learn how to use portal the management tools to configure report caches, snapshots and subscriptions. Instruction and practice in designing report security to insure protection of enterprise data will be provided.

The student will gain experience with the new Report Services Web portal, which enables publishing content other than paginated reports, such as Excel and Power BI. Students will also learn how to include KPIs (Key Performance Indicators) directly from a shared data set.

Students who wish to attend 2-day coverage of SSIS and SSAS in addition to 3 days of SSRS coverage, should instead sign up for the 5-day **SQL Server 2017 Business Intelligence Application Development (SSRS, SSIS, SSAS)** course. The **SQL Server 2017 Business Intelligence Application Development (SSRS, SSIS, SSAS)** course covers everything in the **SQL Server 2017 Reporting Services** course, plus a 1-day overview each for Integration Services and Analysis Services.

Students requiring more in-depth coverage of SSIS and SSAS, as well as SSRS coverage should attend the 3-day **SQL Server 2017 Reporting Services** course followed by the 5-day **SQL Server 2017 Business Intelligence: Integration Services and Analysis Services** course, which provides 5-days of coverage for SSIS and SSAS capabilities.

**Duration:** 3 days

**Prerequisites:** Familiarity with database concepts, Windows desktop navigation and Transact-SQL. Attendance at our **Microsoft Transact-SQL Programming** course is highly recommended although not required.

**More Info:** [www.software-skills-training.com/Courses/sql-2017-reporting-services-course.htm](http://www.software-skills-training.com/Courses/sql-2017-reporting-services-course.htm)

# SQL Server 2017 Business Intelligence Application Development (SSRS, SSIS, SSAS)

**Description:** This hands-on course introduces the SQL Server 2017 Business Intelligence Suite, including Reporting Services (SSRS), Integration Services (SSIS) and Analysis Services (SSAS). Students will complete hands-on exercises creating a number of reports including table-based, cross tabular and forms based designs. Reports utilizing charts, gauges, KPIs, spark lines, data bars and tree maps will be built. Exercises will incorporate the use of report parameters and features such as drill down, interactive sorting, hyperlinks, book marks and report maps.

Consuming data from relational, multi-dimensional and tabular data sources will be incorporated into report designs. Students will become familiar with report deployment to the Reporting Service Web Portal and learn how to use portal the management tools to configure report caches, snapshots and subscriptions. Instruction and practice in designing report security to insure protection of enterprise data will be provided.

Students will gain experience with the Report Services Web portal, which enables publishing content other than paginated reports, such as Excel and Power BI. Students will also learn how to include KPIs (Key Performance Indicators) directly from a shared data set.

One day is reserved for SQL Server Integration Services (SSIS). Students will learn the basics of creating SSIS packages using SQL Server Data Tools to create Extract Transform and Load solutions used to populate data warehouses and marts.

In the final day, based on a populated data warehouse they have created, students will then learn how to develop an SQL Server Analysis Services (SSAS) multidimensional (cube) model using Multidimensional Expressions (MDX) syntax. Cubes will be customized to include Key Performance Indicators (KPIs), Calculated Members, Named Sets, Navigational Hierarchies, and Perspectives. Also, a brief introduction to the SSAS Tabular module will be provided.

Students only interested in SSRS coverage should sign up for the 3-day **SQL Server 2017 Reporting Services** course.

Students interested in SSRS coverage and extended coverage of SSIS and SSAS should instead sign up for the **SQL Server 2017 Reporting Services** course followed by the **SQL Server 2017 Business Intelligence: Integration Services and Analysis Services** course, which provides 5-days of coverage for SSIS and SSAS capabilities.

**Duration:** 5 days

**Prerequisites:** Familiarity with database concepts, Windows desktop navigation and Transact-SQL. Attendance at our **Microsoft Transact-SQL Programming** course is highly recommended although not required.

**More Info:**

[www.software-skills-training.com/Courses/sql-2017-business-intelligence-training-course.htm](http://www.software-skills-training.com/Courses/sql-2017-business-intelligence-training-course.htm)

# SQL Server 2017 Business Intelligence: Integration Services and Analysis Services

**Description:** SQL Server 2017 provides a rich environment for business intelligence development. The focus of this course is to familiarize developers with the use of the SQL Server Database Engine, SQL Server Integration Services (SSIS), and SQL Server Analysis Services (SSAS) for business intelligence purposes. Students will design an OLAP database utilizing a star schema (Data Warehouse), and then populate it using ETL routines designed in SSIS. After the data warehouse has been populated, SSAS will be used to build both Multidimensional and Tabular models that will serve as reporting data sources.

Students will learn how to design and build data warehouses and marts using SQL Server Management Studio. In a series of exercises, students develop SSIS packages designed to maintain a data warehouse using the Data Flow control flow task. Also demonstrated are other control flow tasks that can interact with an NTFS file system, FTP server, execute Win32 processes, send emails, and run .NET scripts.

Based on the populated data warehouse they have created, students will then learn how to develop both Multidimensional and Tabular SSAS models using the languages Multidimensional Expressions (MDX) and Data Analysis Expressions (DAX). Cubes will be customized to include Key Performance Indicators (KPIs), Calculated Members, Named Sets, Navigational Hierarchies, and Perspectives.

**Duration:** 5 days

**Prerequisites:** Familiarity with database concepts, Windows desktop navigation and Transact-SQL. Attendance at our **Microsoft Transact-SQL Programming** course is highly recommended although not required.

**More Info:** [www.software-skills-training.com/Courses/ssis-ssas-2017-training-course.htm](http://www.software-skills-training.com/Courses/ssis-ssas-2017-training-course.htm)

# Microsoft SQL Server 2016 Administration

**Description:** This five-day instructor-led course provides students who administer and maintain SQL Server 2016 databases with the knowledge and skills to administer a SQL Server database infrastructure.

The primary audience for this course is individuals who administer and maintain SQL Server databases. These individuals perform database administration and maintenance as their primary area of responsibility, or work in environments where databases play a key role in their primary job.

Comprehensive hands on exercises are integrated throughout the course to reinforce learning and develop real competency, including a highlight final exercise where students perform an actual failover between two SQL Server machines.

**Duration:** 5 days

**Prerequisites:** Familiarity with database concepts, Windows desktop navigation and Transact-SQL. Attendance at our **Microsoft Transact-SQL Programming** course is highly recommended although not required.

**More Info:**

[www.software-skills-training.com/Courses/sql-server-2016-administration-training-course.htm](http://www.software-skills-training.com/Courses/sql-server-2016-administration-training-course.htm)

# SQL Server 2016 Reporting Services

**Description:** SQL Server Reporting Services 2016 contains significant new functionality and improvements over its predecessors including the new Reporting Services Web portal, support for mobile reports and dashboards, a new HTML5 rendering engine and exciting new report design enhancements.

The three day course includes an overview of the SQL Server business intelligence architecture focusing the role of Reporting services. All reports are developed utilizing SQL Server Data Tools (SSDT), however the new 2016 Report Designer is also introduced.

Students will complete hands-on exercises creating a number of reports including table-based, cross tabular and forms based designs. Reports utilizing the newly designed charts, gauges, KPIs, spark lines, data bars and tree maps will be built. Exercises will incorporate the use of report parameters and features such as drill down, interactive sorting, hyperlinks, book marks and report maps.

Consuming data from relational, multi-dimensional and the new tabular data sources will be incorporated into report designs. Students will become familiar with report deployment to the new Reporting Service Web Portal (replaced Report Manager) and learn how to use portal the management tools to configure report caches, snapshots and subscriptions. Instruction and practice in designing report security to insure protection of enterprise data will be provided.

The student will gain experience with the new Report Services Web portal, which enables publishing content other than paginated reports, such as Excel and Power BI. Students will also learn how to include KPIs (Key Performance Indicators) directly from a shared data set.

Students who wish to attend 2-day coverage of SSIS and SSAS in addition to 3 days of SSRS coverage, should instead sign up for the 5-day **SQL Server 2016 Business Intelligence Application Development (SSRS, SSIS, SSAS)** course. The **SQL Server 2016 Business Intelligence Application Development (SSRS, SSIS, SSAS)** course covers everything in the **SQL Server 2016 Reporting Services** course, plus a 1-day overview each for Integration Services and Analysis Services.

Students requiring more in-depth coverage of SSIS and SSAS, as well as SSRS coverage should attend the 3-day **SQL Server 2016 Reporting Services** course followed by the 5-day **SQL Server 2016 Business Intelligence: Integration Services and Analysis Services** course, which provides 5-days of coverage for SSIS and SSAS capabilities.

**Duration:** 3 days

**Prerequisites:** Familiarity with database concepts, Windows desktop navigation and software installation techniques. Attendance at our **SQL Programming** course or **Microsoft Transact-SQL Programming** course is highly recommended although not required.

**More Info:** [www.software-skills-training.com/Courses/sql-2016-reporting-services-course.htm](http://www.software-skills-training.com/Courses/sql-2016-reporting-services-course.htm)

# SQL Server 2016 Business Intelligence Application Development (SSRS, SSIS, SSAS)

**Description:** SQL Server Reporting Services 2016 contains significant new functionality and improvements over its predecessors including the new Reporting Services Web portal, support for mobile reports and dashboards, a new HTML5 rendering engine and exciting new report design enhancements.

All reports are developed utilizing SQL Server Data Tools (SSDT), however the new 2016 Report Designer is also introduced. Students will complete hands-on exercises creating a number of reports including table-based, cross tabular and forms based designs. Reports utilizing the newly designed charts, gauges, KPIs, spark lines, data bars and tree maps will be built. Exercises will incorporate the use of report parameters and features such as drill down, interactive sorting, hyperlinks, book marks and report maps.

Consuming data from relational, multi-dimensional and the new tabular data sources will be incorporated into report designs. Students will become familiar with report deployment to the new Reporting Service Web Portal (replaced Report Manager) and learn how to use portal the management tools to configure report caches, snapshots and subscriptions. Instruction and practice in designing report security to insure protection of enterprise data will be provided.

The student will gain experience with the new Report Services Web portal, which enables publishing content other than paginated reports, such as Excel and Power BI. Students will also learn how to include KPIs (Key Performance Indicators) directly from a shared data set.

One day is reserved for SQL Server Integration Services (SSIS). Students will learn the basics of creating SSIS packages using SQL Server Data Tools to create Extract Transform and Load solutions used to populate data warehouses and marts. In the final day, based on a populated data warehouse they have created, students will then learn how to develop an SQL Server Analysis Services (SSAS) multidimensional (cube) model using Multidimensional Expressions (MDX) syntax. Cubes will be customized to include Key Performance Indicators (KPIs), Calculated Members, Named Sets, Navigational Hierarchies, and Perspectives. Also, a brief introduction to the SSAS Tabular module will be provided.

Students only interested in SSRS coverage should sign up for the 3-day **SQL Server 2016 Reporting Services** course.

Students interested in SSRS coverage and extended coverage of SSIS and SSAS should instead sign up for the **SQL Server 2016 Reporting Services** course followed by the **SQL Server 2016 Business Intelligence: Integration Services and Analysis Services** course, which provides 5-days of coverage for SSIS and SSAS capabilities.

**Duration:** 5 days

**Prerequisites:** Familiarity with database concepts, Windows desktop navigation and software installation techniques. Attendance at our **SQL Programming** course or **Microsoft Transact-SQL Programming** course is highly recommended although not required.

**More Info:** [www.software-skills-training.com/Courses/sql-2016-business-intelligence.htm](http://www.software-skills-training.com/Courses/sql-2016-business-intelligence.htm)

# SQL Server 2016 Business Intelligence: Integration Services and Analysis Services

**Description:** SQL Server 2016 provides a rich environment for business intelligence development. The focus of this five day course is to familiarize developers with the use of SQL Server Engine, SQL Server Integration Services (SSIS) and SQL Server Analysis Services (SSAS) to create and populate data warehouses through ETL processing and build Multidimensional and Tabular models to use and reporting data sources.

Students will learn how to design and build data warehouses and marts using SQL Server Management Studio. In a series of exercises, students develop SSIS packages designed to maintain a data warehouse using the Data Flow control flow task. Also demonstrated are other control flow tasks that can interact with an NTFS file system, FTP server, execute Win32 processes, send emails, and run .NET scripts.

Based on the populated data warehouse they have created, students will then learn how to develop both Multidimensional and Tabular SSAS models using the languages Multidimensional Expressions (MDX) and Data Analysis Expressions (DAX). Cubes will be customized to include Key Performance Indicators (KPIs), Calculated Members, Named Sets, Navigational Hierarchies, and Perspectives.

**Duration:** 5 days

**Prerequisites:** Familiarity with database concepts, Windows desktop navigation and software installation techniques. Attendance at our **SQL Programming** course or **Microsoft Transact-SQL Programming** course is highly recommended although not required.

**More Info:** [www.software-skills-training.com/Courses/ssis-ssas-2016-training-course.htm](http://www.software-skills-training.com/Courses/ssis-ssas-2016-training-course.htm)

# Java Programming

*Java, Java EE, EJB,  
Spring, Hibernate*



**Description:** This hands on course introduces experienced programmers to Java™ technology and Java programming techniques. The Java platform provides an object-oriented, portable and robust framework for application development. Included are core language concepts including fundamental data types, flow control, and standard function libraries. The course emphasizes object oriented programming and modular design to support distributed development environments. Included are the design of classes and objects, inheritance and polymorphism, and the details about creating programs for use on a distributed network, with emphasis on JSP, Servlets, and JDBC. The course also includes coverage of the Java Collections API, fundamental I/O, exceptions, and exception handling.

The course is designed to leverage the participants' existing programming skills and to highlight the new and extended features of the Java programming framework as compared to other common languages. Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

**Duration:** 5 days

**Prerequisites:** Basic programming skills in a structured language. Knowledge and experience with Object-Oriented Design (OOD) is helpful, but not required.

**More Info:** [www.software-skills-training.com/Courses/java-programming.htm](http://www.software-skills-training.com/Courses/java-programming.htm)

# Effectively Using Java™ Packages And Features

**Description:** This intermediate level course is intended for programmers who already have a fundamental understanding of Java programming and some experience writing code. It provides additional insights and details regarding some of the more advanced and useful capabilities contained in the Java Programming Language and its associated packages. Topics include reflection and JavaBeans, Java type safety enhancements, the Java Collections Framework, Java Database Connectivity (JDBC), multithreading, inner classes, lambda expressions and networking.

Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

**Duration:** 5 days

**Prerequisites:** Familiarity with and experience using Java. Completion of either the **Learning to Program with Java** or **Java Programming** course, or equivalent Java programming experience.

**More Info:** [www.software-skills-training.com/Courses/advanced-java-programming.htm](http://www.software-skills-training.com/Courses/advanced-java-programming.htm)

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# Introduction to Web Application Development Using JEE™, Spring/Hibernate, Web Services and AJAX

**Description:** This course provides students hands on experience with cutting edge Java Enterprise (Java EE) technologies, creating dynamic web and enterprise applications that utilize several Java frameworks and technologies including JSP's and Servlets, Java Persistence API (JPA), JNDI, JDBC, AJAX, Web Services, Spring and Hibernate. The goal is to enable students to exploit the Java EE platform and accompanying frameworks to facilitate the development of distributed, web-enabled applications.

Students will architectural design issues as well as specific coding models for a variety of Java EE components. By working with several Java frameworks in hands on labs, students will build applications that incorporate many of the patterns commonly used in these and other Java frameworks. Upon completion of the course, students should be able to learn and effectively utilize frameworks appropriate for their application environment.

Starting with Java Server Pages and Servlets, the course then introduces some of the most widely used frameworks to provide concrete illustrations of the services available. Since coding and deployment files are standardized by the Java EE specifications, students may readily apply the skills learned in this class to write code for any compliant server, including Apache Tomcat, JBoss, WebSphere, Oracle, WebLogic and many others.

Students will learn how to utilize ANT, a flexible and powerful XML-based build utility, to compile, deploy and execute stand-alone and enterprise Java applications. They will also use ANT to execute standalone client applications that communicate with Java EE applications. Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

**Duration:** 5 days

**Prerequisites:** Java SE programming experience and an understanding of object-oriented design principles. Fundamental knowledge of XML, HTML, and JavaScript is helpful but not required. SST's course **Java Programming** or equivalent knowledge provides a solid foundation.

**More Info:** [www.software-skills-training.com/Courses/java-spring-course.htm](http://www.software-skills-training.com/Courses/java-spring-course.htm)

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# Web Application Development Using Spring, Hibernate and JPA

**Description:** This course provides a comprehensive introduction to JPA (the Java Persistence API), the Spring and Hibernate open source frameworks as well as Web Services and AJAX. Suitable for both Spring3/Hibernate3 and Spring4/Hibernate4, the course includes coverage of the core Spring and Hibernate capabilities, as well as the integration capabilities provided by Spring.

This course introduces techniques for using the many new and powerful capabilities that Spring4 supports. It includes complete coverage of the three main configuration styles (@Configuration, @Component, XML), and guidelines for their usage. It also covers more advanced capabilities such as support for JDBC and persistence frameworks like Hibernate, Spring declarative transactions, and Spring integration with JEE Web technologies.

The course covers all important capabilities of the Hibernate open source object/relational persistence and query service for Java. Coverage includes developing persistent classes in Java, as well as using associations/relationships, inheritance, polymorphism, composition and collections. It also covers fundamentals of JPA (the Java Persistence API) including JPA Annotations and JPQL (Java Persistence Query Language).

Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency. Attendees build working Spring/Hibernate applications utilizing the Eclipse IDE, providing a knowledge foundation applicable to all major development environments.

**Duration:** 5 days

**Prerequisites:** Java SE programming experience and an understanding of object-oriented design principles. Fundamental knowledge of XML, HTML, and JavaScript is helpful but not required. SST's course **Java Programming** or equivalent knowledge provides a solid foundation.

**More Info:** [www.software-skills-training.com/Courses/spring-hibernate-training-course.htm](http://www.software-skills-training.com/Courses/spring-hibernate-training-course.htm)

# Introduction to Spring 5, Spring Boot and Spring REST

**Description:** Spring 5 provides an evolutionary advance of Spring's powerful capabilities. This course introduces the many Spring Core capabilities, as well as providing guidelines on when and how to use them. It also goes into considerable depth on Spring Boot for dependency management and auto-configuration, as well as Spring REST for creating RESTful resources.

This course has been completely revised to utilize Spring Boot's easy configuration and auto-configuration wherever possible. "Classic" Spring configuration (usually more verbose and complicated) is optionally covered in abbreviated form.

The course starts with in-depth coverage of Spring's Core module to reduce coupling and increase the flexibility, ease of maintenance, and testing of your applications. It goes on to cover many of the most important capabilities of Spring, including easing configuration with Spring Boot, integrating JPA persistence layers with Spring and Spring Data, and using Spring's declarative transaction capabilities.

The course includes a solid introduction to Spring REST, and coverage of building RESTful resources. It also covers many of the details of Spring Boot, including how to create Boot-based POMs (maven) for simplified dependency management, customizing Boot behavior, and understanding/managing Boot's auto-configuration.

This course is hands on with labs to reinforce all the important concepts, and will enable you to build working Spring applications with Java.

Students desiring coverage of Spring MVC rather than Spring Boot may instead be interested in attending the **Introduction to Spring 5, Spring MVC and Spring REST** course.

**Duration:** 5 days

**Prerequisites:** Java SE programming experience and an understanding of object-oriented design principles. Fundamental knowledge of XML is helpful but not required. The **Java Programming** course or equivalent knowledge provides a solid foundation.

**More Info:** [www.software-skills-training.com/Courses/spring-5-boot-rest-course.htm](http://www.software-skills-training.com/Courses/spring-5-boot-rest-course.htm)

# Introduction to Spring 5, Spring MVC and Spring REST

**Description:** Spring 5 provides an evolutionary advance of Spring's powerful capabilities. This course introduces these capabilities, as well as providing guidelines on when and how to use them. It includes coverage of the three main configuration styles: Java-based (@Configuration), annotation-based (@Component), and the traditional XML-based configuration that may still play an important role in existing and new projects.

The course starts with in-depth coverage of Spring's Core module to reduce coupling and increase the flexibility, ease of maintenance, and testing of your applications. It goes on to cover many of the most important capabilities of Spring, including easing configuration with Spring Boot, integrating Hibernate and JPA persistence layers with Spring and Spring Data, and using Spring's declarative transaction capabilities.

The course includes integration of Spring with Java EE Web applications, a solid introduction to Spring MVC, and coverage of building RESTful resources with Spring MVC. It also provides an overview of Spring's reactive programming model for repositories and Web resources.

This course is hands on with labs throughout the course to reinforce all the important concepts. It will enable you to build working Spring applications and give you an understanding of the important concepts and technology in a very short time.

Students desiring coverage of Spring Boot rather than Spring MVC may instead be interested in attending the **Introduction to Spring 5, Spring Boot and Spring REST** course.

**Duration:** 5 days

**Prerequisites:** Java SE programming experience and an understanding of object-oriented design principles. Fundamental knowledge of XML is helpful but not required. The course **Java Programming** or equivalent knowledge provides a solid foundation.

**More Info:** [www.software-skills-training.com/Courses/spring-5-training-course.htm](http://www.software-skills-training.com/Courses/spring-5-training-course.htm)

# Introduction to the Spring 5 Framework

**Description:** Spring 5 provides an evolutionary advance of Spring's powerful capabilities. This course introduces these capabilities, as well as providing guidelines on when and how to use them. It includes coverage of the three main configuration styles: Java-based (@Configuration), annotation-based (@Component), and the traditional XML-based configuration that may still play an important role in existing and new projects.

The course starts with in-depth coverage of Spring's Core module to reduce coupling and increase the flexibility, ease of maintenance, and testing of your applications. It goes on to cover many of the most important capabilities of Spring, including easing configuration with Spring Boot, integrating Hibernate and JPA persistence layers with Spring and Spring Data, and using Spring's declarative transaction capabilities. It also covers integration of Spring with Java EE Web applications.

This course is hands on with labs throughout the course to reinforce all the important concepts. It will enable you to build working Spring applications and give you an understanding of the important concepts and technology in a very short time.

Students desiring additional coverage of Spring Boot and Spring REST should instead consider attending the **Introduction to Spring 5, Spring Boot and Spring REST** course. Students desiring additional coverage of Spring MVC and Spring REST should instead consider attending the **Introduction to Spring 5, Spring MVC and Spring REST** course.

**Duration:** 3 days

**Prerequisites:** Java SE programming experience and an understanding of object-oriented design principles. Fundamental knowledge of XML is helpful but not required. The course **Java Programming** or equivalent knowledge provides a solid foundation.

**More Info:** [www.software-skills-training.com/Courses/java-spring-5-training.htm](http://www.software-skills-training.com/Courses/java-spring-5-training.htm)

# Introduction to Spring Boot 2

**Description:** As the Spring framework has grown, creating and configuring Spring applications has become more and more complex. Spring Boot takes an "opinionated" view of an application (via intelligent defaults) that minimizes configuration and boilerplate Spring code. Spring Boot makes it easier to use Spring's many frameworks, and adds advanced capabilities such as health monitoring. This course introduces Spring Boot from the ground up, including overviews of building blocks such as Maven. It covers the key features and capabilities of Spring Boot, and teaches experienced Spring developers the skills they need to use Spring Boot productively. This course covers Spring Boot 2 and Spring 5 - the current releases of these frameworks.

Labs are done with the Eclipse IDE, and the lab instructions include detailed directions for setting up and using it. Comprehensive hands on exercises are integrated throughout the course to reinforce learning and develop real competency.

Students desiring additional coverage of Spring 5 and Spring REST should instead consider attending the **Introduction to Spring 5, Spring Boot and Spring REST** course.

**Duration:** 3 days

**Prerequisites:** Java SE programming experience equivalent to attending the **Java Programming** course and basic knowledge of Spring equivalent to attending the 3-day **Introduction to Spring 5 Framework** course.

**More Info:** [www.software-skills-training.com/Courses/java-spring-boot-training-course.htm](http://www.software-skills-training.com/Courses/java-spring-boot-training-course.htm)

# Object Oriented Analysis & Design with UML

**Description:** This OOA&D training course presents the key concepts and methodologies required to perform quality object-oriented software engineering, with particular attention to practical techniques such as use-case and CRC analysis, UML diagramming, and patterns. Students practice applying object oriented analysis during the course to improve software designs and to see how software objects can be altered to build software systems that are more robust and less expensive. Students use several methods for analyzing software systems, finding and refining useful classes and relationships between objects. Care is taken not to focus on any one language so that all students can participate in the design exercises without relying on specific programming skills. The course emphasizes the most practical analysis and design methods, including the application of use case analysis, CRC analysis, problem domain analysis, activity diagramming, interaction diagramming, and class diagramming. The Unified Modeling Language (UML) is presented in detail and is used in the exercises and case studies. Practical aspects of project management and implementation are presented from the perspective of experienced object system designers. Special emphasis is given to the use of object patterns in developing software systems. The students apply their skills in labs that are mini design sessions, during which the instructor helps the students identify and overcome common obstacles that occur during group sessions.

**Duration:** 4 days

**Prerequisites:** Knowledge of structured programming concepts.

**More Info:** [www.software-skills-training.com/Courses/uml-training.htm](http://www.software-skills-training.com/Courses/uml-training.htm)

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# SharePoint

*Power User*



# SharePoint 2016 Power User

**Description:** This introductory hands-on course thoroughly covers out-of-the-box features of SharePoint and how to customize these features to make the most of your SharePoint environment. The course begins with an overview of SharePoint system architecture, then moves on to creating SharePoint Web sites. From there, students will deploy navigation solutions for users to easily locate data. Students learn how to create new sites from scratch, as well as from built-in templates. Pages and web parts are then added to sites to provide greater flexibility to the way SharePoint is presented to users.

Included are techniques for using lists to promote information sharing, creating surveys, managing tasks and projects, as well as sharing calendars. Document and file management is also covered, including content approval, managing major and minor file versions and document checkout & check-in.

Students will learn how to use built-in workflows, as well as how to display database records on SharePoint sites using Business Connectivity Services (BCS).

Comprehensive hands on exercises illustrate the concepts and techniques presented, and provide practice creating common SharePoint components.

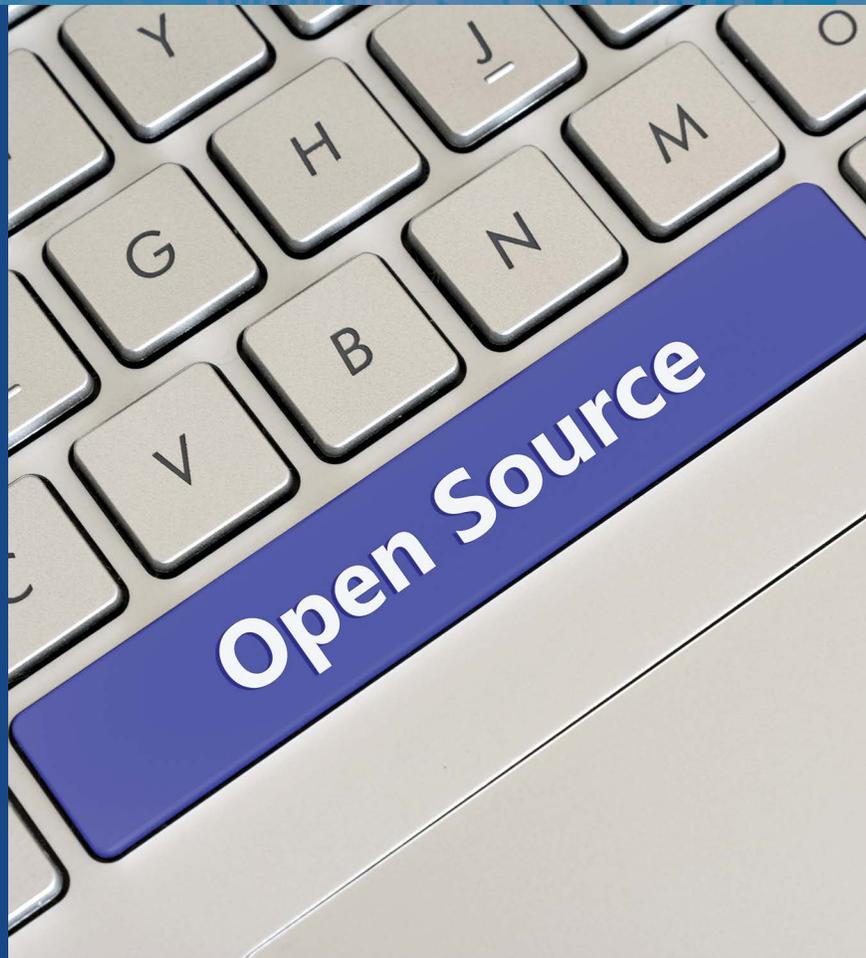
**Duration:** 3 days

**Prerequisites:** Familiarity with Windows Server 2012 R2 or Windows desktop operating system environment (Windows 8.1 or later). Basic understanding of NTFS file & folder structure and network access.

**More Info:** [www.software-skills-training.com/Courses/sharepoint-2016-power-user-course.htm](http://www.software-skills-training.com/Courses/sharepoint-2016-power-user-course.htm)

# Unix/Linux

*Fundamentals,  
Administration and  
Shell Programming*



# UNIX/Linux Fundamentals and Shell Scripting

**Description:** This hands on course provides training on standard UNIX/Linux commands and utilities used for day to day tasks including file manipulation, program execution and control, and effective use of the shell and desktop environments. The course presents the concepts necessary to understand the way UNIX works as well as the system's most commonly used commands. Data manipulation utilities and shell syntax for synthesizing command pipelines are emphasized. Bourne shell, Bash shell and Korn shell programming techniques are introduced so students will be able to read and modify existing shell scripts as well as create their own. Desktop environments are also introduced from a user's perspective, including common window managers, Open Office utilities and an introduction to configuration tools. Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

**Duration:** 5 days

**Prerequisites:** None.

**More Info:** [www.software-skills-training.com/Courses/unix-course.htm](http://www.software-skills-training.com/Courses/unix-course.htm)

# Korn Shell and Bash Shell Programming

**Description:** This hands on Korn and Bash Shell scripting course provides a comprehensive introduction to writing Korn and Bash shell scripts. Besides covering fundamental syntax for program flow control, variable assignment and substitution, I/O control, and mathematical expressions, it emphasizes the powerful features of these shells, including built-in string operators, variable typesetting/conversion, functions, and coprocess communication and control. The creative use of standard UNIX and Linux utilities within scripts to solve problems is stressed throughout. The course is designed for the administrators and programmers who are developing, testing, or integrating software on UNIX or Linux, as well as for advanced UNIX or Linux users. Both the commonalities and differences between the Korn and Bash shells are examined, and students will have the opportunity to learn from examples coded in both shells. Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

**Duration:** 3 days

**Prerequisites:** Familiarity with UNIX file system and commands. Students who are not familiar with UNIX file system and commands should register for the course **UNIX/Linux Fundamentals**.

**More Info:** [www.software-skills-training.com/Courses/korn-shell-training.htm](http://www.software-skills-training.com/Courses/korn-shell-training.htm)

# Linux System Administration

**Description:** Students learn how to install, configure and maintain an Enterprise Linux system in a networked environment. Basic administrative tasks are covered such as: creating and managing users, creating and maintaining file systems, determining and implementing security measures and performing software installation and package management. Linux networking topics include installing and supporting SSH, NFS, Samba and the Apache Web server. Common security issues are discussed and several software tools are introduced such as the PAM modules that help secure the operating system and network environment. Comprehensive hands on exercises are performed throughout the course to reinforce learning and develop skills and competency. Upon successful completion of this course, students will be prepared to maintain Linux systems in a networked business environment.

Although the course includes installing and configuring a CentOS 7 / RHEL 7 Linux system, much of the course content also applies to Oracle, Ubuntu, Scientific and other current versions of mainstream Linux distributions. Labs include user and group maintenance, system backups and restoration, software management, administration tasks automation, file system creation and maintenance, managing remote access, working with cron, and configuring basic file sharing and Web services, as well as working with system logging utilities such as rsyslog and much more.

**Duration:** 5 days

**Prerequisites:** Experience with common UNIX/Linux user-level commands, such as for moving, copying and editing files. Experience with the vi editor is a plus. Attendance at the **UNIX/Linux Fundamentals** course provides a solid foundation.

**More Info:** [www.software-skills-training.com/Courses/linux-training.htm](http://www.software-skills-training.com/Courses/linux-training.htm)

*The instructor was exceptional. He was patient, friendly and extremely knowledgeable. This course was well-designed and thorough. I learned a ton.*

*-A.H.*

*The instructor did an excellent job with the class. It was very informational and enjoyable. He did a good job mixing in real world views to support the lessons.*

*- B. W.*

# C and C++ Programming



# C Programming

**Description:** This hands on C programming course provides a comprehensive introduction to the ANSI C language, emphasizing portability and structured design. Students are introduced to all major language elements including fundamental data types, flow control, and standard function libraries. Thorough treatment is given to the topics of string and character manipulation, dynamic memory allocation, standard I/O, macro definition, and the C runtime library. The course explains the use of aggregate structures, unions, and pointers early on so the students can practice extensively in the hands on labs. Structured programming constructs and varargs functions are also covered. Emphasis is given to the processing of command line arguments and environment variables so students will be able to write flexible, user-friendly programs. The course also includes coverage of portability tips drawn from experienced programmers working in production environments. Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

**Duration:** 5 days

**Prerequisites:** Understanding of fundamental programming concepts.

**More Info:** [www.software-skills-training.com/Courses/c-programming-course.htm](http://www.software-skills-training.com/Courses/c-programming-course.htm)

# C++ Programming for C Programmers

**Description:** This C++ course presents a thorough introduction to object-oriented programming in C++ for experienced C programmers. The central concepts of C++ syntax and style are taught in the context of using object-oriented methods to achieve reusability, adaptability and reliability. Emphasis is placed on the features of C++ that support abstract data types, inheritance, and polymorphism. Students will learn to apply the process of data abstraction and class design. Extensive programming examples and exercises are provided, with approximately half of course time spent performing hands on programming labs. Practical aspects of C++ programming including efficiency, performance, testing, and reliability considerations are stressed throughout.

**Duration:** 4 days

**Prerequisites:** Prior programming experience with C.

**More Info:** [www.software-skills-training.com/Courses/c++-course.htm](http://www.software-skills-training.com/Courses/c++-course.htm)

# C++ Programming for Non-C Programmers

**Description:** This C++ programming course provides an accelerated introduction to the most essential syntactical components of the C and C++ languages on the first day, prior to four days of focus on object-oriented programming with C++. The course begins by introducing the built in data types, fundamental control constructs, and rich expression operator repertoire common to both C and C+. The remainder of the course teaches object-oriented programming using features of C++, congruent with the C++ for C Programmers course. Hands on exercises are performed throughout each day to demonstrate key concepts and assure mastery by the student.

**Duration:** 5 days

**Prerequisites:** Prior programming experience, though not necessarily in C or C++. Some prior knowledge of basic C syntax is helpful but not required.

**More Info:** [www.software-skills-training.com/Courses/c++-programming.htm](http://www.software-skills-training.com/Courses/c++-programming.htm)

*I was extremely impressed with your remote setup. Great teacher who made us feel like we were there. I thoroughly enjoyed my week.*

*-F.G.*

*This has been one of the best courses I have taken. The instructor really knows the material and can explain it well, using examples from the real world.*

*- C.M.*

# Critical Thinking



# Critical Thinking for the 21st Century

**Description:** *Critical Thinking* is the process of performing analysis that is objective, logical, logically consistent, fair, and informed by evidence, in order to form a judgment, make a decision, or determine the truth. *Critical Thinking for the 21st Century* teaches students to think critically in their personal and professional lives.

The course teaches practical skills and provides practical experience to individuals who need to develop competence and/or refine expertise in the thought processes necessary for success in the 21st century service- and information-based economy.

The course teaches and provides practice in making logical arguments, as well as assessing, weighing and analyzing evidence. We discuss the ways in which brain biology affects memory and decision-making, how emotions often muddle our thinking, whether or not we are aware of these emotions, and how to work around these challenges. We examine how techniques of persuasion and propaganda affect our thinking, often more than we know, and what we can do to counteract such effects. We address the problem of obtaining accurate, reliable and unbiased information from the news media and other sources of information, and we explore the subject of understanding and presenting visual information.

We examine the many biases that are built into the human condition, and which so often defeat logical reasoning. We take a practical look at statistics, examine how to argue and understand arguments effectively, and study guidelines and techniques for effective decision-making. Finally, we look at commonly misunderstood words, the irrational process involved in conspiracy theories, the effect of advertising on behavior, the effect and use of fear in popular culture, and the habits of good critical thinkers.

Each course module is self-contained, so, while students are generally best served if they complete the entire course, students and enterprises may opt to eschew any material that is judged to be unnecessary or irrelevant to them.

**Duration:** 28 hours

**Prerequisites:** A high school education, GED, or equivalent experience. Familiarity with basic computer functions (sending and receiving email, using a web browser, running apps, downloading apps) is helpful but not required.

**More Info:**

[www.software-skills-training.com/Courses/critical-thinking-for-the-21st-century-training.htm](http://www.software-skills-training.com/Courses/critical-thinking-for-the-21st-century-training.htm)

# Project Management



# Project Management

**Description:** Students will broaden their awareness of formal project management practices through classroom lecture combined with discussion and learning activities. The course promotes the application of proven practices by providing a more structured approach to project management. Participants are encouraged to use current project management challenges for class discussion. The discussions and learning activities enable the student to apply immediate solutions to real-time project management challenges.

The project management course is appropriate for newer and experienced project professionals affording students both fundamental and intermediate training. The course focus is on project management processes and as such applies to every domain. The course is aligned with the Project Management Institute's Project Management Body of Knowledge Guide Sixth Edition (PMBOK® Guide 6th Edition). As such, the course touches on predictive, incremental and adaptive project development methodologies. The learning objectives include distinguishing the 49 processes detailed in the PMBOK® Guide 6th Edition which are widely recognized as defining best practices for most projects much of the time. PMBOK® is a registered trademark of the Project Management Institute, Inc.

The PMI® (Project Management Institute (PMI) is a leading source of project management certifications. This course does not include the cost of any PMI credential. Qualified students are encouraged to pursue credentialing opportunities by visiting the PMI website. Please visit the PMI website for details on certification, certification testing centers and PDU requirements.

This class does provide 28 hours of formal project management education needed for PMI certifications such as Project Management Professional (PMP)® and Certified Associate in Project Management (CAPM)® as well as earning PDU's required for maintaining PMI certification. PMI®, CAPM® and PMP® are registered trademarks of the Project Management Institute, Inc.

**Duration:** 4 days

**Prerequisites:** This course is designed for project managers, team members, and senior managers looking to acquire a firm grasp of specific steps in the project management process.

**More Info:** [www.software-skills-training.com/Courses/project-management-training-class.htm](http://www.software-skills-training.com/Courses/project-management-training-class.htm)

*"PMI", "PMP", "PMBOK", and "CAPM" are trademarks of Project Management Institute, Inc.*

# Test-Driven Development (TDD)



# Test Driven Development (TDD), and Refactoring Legacy Code Using C#

**Description:** This course provides students with hands on experience learning Test Driven Development (TDD) using NUnit and Microsoft's Visual Studio. Students will build unit tests using mocks, fakes, stubs and drivers, and address issues working with databases and other systems. Student will create tests and code that will be more likely to meet and exceed requirements. Code that receives "test coverage" will not break existing systems, because tests are passed before code is checked in.

Students will spend time working with the issues involved in refactoring legacy code, safely cutting into an already deployed system. Students will work on looking for, or creating "seams" to more safely improve code or add features, and work on identifying "code smells" that need attention in a productive system. Finally, students will explore dependency issues as well as techniques to better understand and improve complex systems.

Comprehensive labs using C# provide facilitated hands on practice that is crucial to the development of competence and confidence with the new skills being learned.

**Duration:** 4 days

**Prerequisites:** C# programming experience and an understanding of object-oriented design principles. The **Learning to Program with C#** course or equivalent knowledge provides a solid foundation.

**More Info:** [www.software-skills-training.com/Courses/tdd-c-sharp-training-course.htm](http://www.software-skills-training.com/Courses/tdd-c-sharp-training-course.htm)

# Test Driven Development (TDD), and Refactoring Legacy Code Using Java

**Description:** This course provides students with hands on experience learning Test Driven Development (TDD) using JUnit. Students will build unit tests using mocks, fakes, stubs and drivers, and address issues working with databases and other systems. Student will create tests and code that will be more likely to meet and exceed requirements. Code that receives “test coverage” will not break existing systems, because tests are passed before code is checked in.

Students will spend time working with the issues involved in refactoring legacy code, safely cutting into an already deployed system. Students will work on looking for, or creating “seams” to more safely improve code or add features, and work on identifying “code smells” that need attention in a productive system. Finally, students will explore dependency issues as well as techniques to better understand and improve complex systems.

Comprehensive Java labs in the course provide facilitated hands on practice that is crucial to developing competence and confidence with the new skills being learned.

**Duration:** 4 days

**Prerequisites:** Java programming experience and an understanding of object-oriented design principles. The **Java Programming** course or equivalent knowledge provides a solid foundation.

**More Info:** [www.software-skills-training.com/Courses/tdd-java-training-course.htm](http://www.software-skills-training.com/Courses/tdd-java-training-course.htm)

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# Terms and Conditions

## Terms for Open Enrollment Courses

**Tuition Payment and Refund Policy:** SST accepts company check, electronic funds transfer (EFT) or corporate credit card for payment. Tuition for open-enrollment courses is due in full prior to the start date of the class, with the exception of students from government agencies for which we have a valid purchase order.

Tuition includes all course materials. Students may withdraw before the second day of class (or before completing 4 modules of an on-demand training presentation). Return all course materials and receive a 100% refund.

No refunds are available once 4 or more modules of an on-demand course are completed. Prorated refunds may be granted for withdrawals after the first day.

**Cancellations and Changes:** There are no cancellation fees.

**Attendance Requirements:** Students must attend each day of a course and successfully complete hands on exercises in order to receive a certificate of completion. If a student wishes to retake any portion of a class that he or she completes, the student may do so within 12 months at no extra cost.

**Intended Audience:** Software Skills Training provides IT training designed for technology professionals who wish to quickly upgrade their computer skills. In most states, the employer bears all training costs.

## Terms for On Site Training

For courses held at client sites, SST provides all student materials including student guides and necessary textbooks. The client is responsible for providing the training venue including computer hardware and software required for laboratory sessions. SST can provide equipment to support training at very reasonable rates when required. Course delivery is scheduled by mutual agreement in accordance with the availability of SST instructors and the requirements of the client corporation. Payment is due Net 15 of the final day of each course delivery.

**Website:** [www.software-skills-training.com](http://www.software-skills-training.com)

**Phone:** 978.250.4983

SST's curriculum is designed to keep IT professionals up to date with the industry's leading technologies including:

- ➔ ASP.NET, C#, VB.NET, MVC, Windows Forms, MVC Core, WF
- ➔ SQL, SQL Server, Business Intelligence
- ➔ Java/Java EE, EJB, Spring, Hibernate, Spring MVC
- ➔ UNIX/Linux, Shell Programming
- ➔ HTML5, JavaScript, jQuery, Angular, Node.js, PHP
- ➔ SharePoint, Power User
- ➔ C, C++ Programming
- ➔ Project Management

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