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

Android, Swift, Apache Cordova, Objective-C, Xamarin

Java, Java EE, EJB, Spring, Hibernate

UNIX/Linux, Shell Programming

Windows Server, PowerShell

Attend face-to-face in the classroom, remote-live, on-demand or on site at your facility
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, Swift, Python, Android, Mobile Application Development 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.

**Guaranteed**
- Small Class Sizes
- Quality Instructors
- Competence
- Cost-Effective
# 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

## Introduction to Programming 12

Learning to Program with Java™ .........................................................................................................................................................................................13
Learning to Program with C# .........................................................................................................................................................13
Learning to Program with VB.NET .....................................................................................................................................................14
Introduction to Visual Basic 6.0 ..........................................................................................................................................................14

## .NET Programming 15

ASP.NET Web Forms Programming Using C# ..................................................................................................................16
ASP.NET Web Forms Programming Using VB.NET .....................................................................................................................16
ASP.NET Web Forms Programming for Experienced C# Programmers .........................................................................................17
ASP.NET Web Forms Programming for Experienced VB.NET Programmers ....................................................................................17
ASP.NET MVC Programming Using C# ..............................................................................................................................................18
ASP.NET MVC Programming Using VB.NET ...........................................................................................................................................18
Introduction to ASP.NET Core MVC ..................................................................................................................................................19
Windows Workflow Foundation Using C# ...............................................................................................................................................19
ASP.NET MVC Programming for Experienced C# Programmers .................................................................................................20
ASP.NET MVC Programming for Experienced VB.NET Programmers ...............................................................................................20
Windows Forms Programming Using C# ..............................................................................................................................................21
Windows Forms Programming Using VB.NET ........................................................................................................................................21
Windows Forms Programming for Experienced C# Programmers .................................................................................................22
Windows Forms Programming for Experienced Visual Basic.NET Programmers ....................................................................................22
Windows Presentation Foundation Programming Using C# ................................................................................................................23
Windows Presentation Foundation Programming Using Visual Basic.NET ......................................................................................23
Windows Presentation Foundation Programming for Experienced C# Programmers ........................................................................24
<table>
<thead>
<tr>
<th>Python Programming</th>
<th>30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Python Programming</td>
<td>31</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mobile Application Programming</th>
<th>32</th>
</tr>
</thead>
<tbody>
<tr>
<td>Android™ Application Development</td>
<td>33</td>
</tr>
<tr>
<td>iOS Programming for iPhone® and iPad® Applications Using Objective-C</td>
<td>33</td>
</tr>
<tr>
<td>Advanced iOS Programming for iPhone® and iPad® Applications Using Objective-C</td>
<td>34</td>
</tr>
<tr>
<td>Swift Programming for iPhone® and iPad® Applications</td>
<td>34</td>
</tr>
<tr>
<td>Xamarin Cross-Platform Mobile Application Development</td>
<td>35</td>
</tr>
<tr>
<td>Apache Cordova Cross-Platform Mobile Application Development</td>
<td>35</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Web Development</th>
<th>36</th>
</tr>
</thead>
<tbody>
<tr>
<td>Website Development with HTML5, CSS and Bootstrap</td>
<td>37</td>
</tr>
<tr>
<td>JavaScript Programming</td>
<td>37</td>
</tr>
<tr>
<td>jQuery Programming</td>
<td>38</td>
</tr>
<tr>
<td>Developing Mobile Websites with Responsive Web Design and jQuery Mobile</td>
<td>38</td>
</tr>
<tr>
<td>Developing Web Applications Using AngularJS</td>
<td>39</td>
</tr>
<tr>
<td>Developing Web Applications Using Angular</td>
<td>39</td>
</tr>
<tr>
<td>Node.js Application Development</td>
<td>40</td>
</tr>
<tr>
<td>PHP Programming</td>
<td>40</td>
</tr>
</tbody>
</table>
## SQL Programming and SQL Server Administration

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQL Programming</td>
<td>41</td>
</tr>
<tr>
<td>Microsoft Transact-SQL Programming</td>
<td>42</td>
</tr>
<tr>
<td>Microsoft SQL Server 2016 Administration</td>
<td>42</td>
</tr>
<tr>
<td>SQL Server 2016 Reporting Services</td>
<td>43</td>
</tr>
<tr>
<td>SQL Server 2016 Business Intelligence Application Development (SSRS, SSIS, SSAS)</td>
<td>43</td>
</tr>
<tr>
<td>SQL Server 2016 Business Intelligence: Integration Services and Analysis Services</td>
<td>44</td>
</tr>
<tr>
<td>Microsoft SQL Server 2017 Administration</td>
<td>44</td>
</tr>
<tr>
<td>SQL Server 2017 Reporting Services</td>
<td>45</td>
</tr>
<tr>
<td>SQL Server 2017 Business Intelligence Application Development (SSRS, SSIS, SSAS)</td>
<td>45</td>
</tr>
<tr>
<td>SQL Server 2017 Business Intelligence: Integration Services and Analysis Services</td>
<td>46</td>
</tr>
<tr>
<td>Microsoft SQL Server 2014 Administration</td>
<td>46</td>
</tr>
<tr>
<td>SQL Server 2014 Reporting Services</td>
<td>47</td>
</tr>
<tr>
<td>SQL Server 2014 Business Intelligence Application Development (SSRS, SSIS, SSAS)</td>
<td>47</td>
</tr>
<tr>
<td>SQL Server 2014 Business Intelligence: Integration Services and Analysis Services</td>
<td>48</td>
</tr>
</tbody>
</table>

## Java Programming

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Java™ Programming</td>
<td>49</td>
</tr>
<tr>
<td>Effectively Using Java™ Packages And Features</td>
<td>50</td>
</tr>
<tr>
<td>Web Application Development Using JEE™, Enterprise JavaBeans and JPA</td>
<td>50</td>
</tr>
<tr>
<td>Introduction to Web Application Development Using JEE™, Spring/Hibernate, Web Services and AJAX</td>
<td>51</td>
</tr>
<tr>
<td>Introduction to Spring 4, Spring MVC and Spring REST</td>
<td>51</td>
</tr>
<tr>
<td>Introduction to the Spring 4 Framework</td>
<td>52</td>
</tr>
<tr>
<td>Introduction to Spring 5, Spring MVC and Spring REST</td>
<td>52</td>
</tr>
<tr>
<td>Introduction to the Spring 5 Framework</td>
<td>53</td>
</tr>
<tr>
<td>Object Oriented Analysis &amp; Design with UML</td>
<td>54</td>
</tr>
</tbody>
</table>

## SharePoint

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>SharePoint 2016 Power User</td>
<td>55</td>
</tr>
<tr>
<td>SharePoint 2013 Power User</td>
<td>55</td>
</tr>
</tbody>
</table>
# Table of Contents

<table>
<thead>
<tr>
<th>Unix/Linux</th>
<th>57</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIX/Linux Fundamentals and Shell Scripting</td>
<td>58</td>
</tr>
<tr>
<td>Korn Shell and Bash Shell Programming</td>
<td>58</td>
</tr>
<tr>
<td>Linux System Administration</td>
<td>59</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C and C++ Programming</th>
<th>60</th>
</tr>
</thead>
<tbody>
<tr>
<td>C Programming</td>
<td>61</td>
</tr>
<tr>
<td>C++ Programming for C Programmers</td>
<td>61</td>
</tr>
<tr>
<td>C++ Programming for C Programmers</td>
<td>62</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>XML Programming</th>
<th>63</th>
</tr>
</thead>
<tbody>
<tr>
<td>XML Programming</td>
<td>64</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Management</th>
<th>65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Management</td>
<td>66</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test-Driven Development (TDD)</th>
<th>67</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Driven Development (TDD), and Refactoring Legacy Code Using C#</td>
<td>68</td>
</tr>
<tr>
<td>Test Driven Development (TDD), and Refactoring Legacy Code Using Java™</td>
<td>68</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Windows Administration, PowerShell</th>
<th>69</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation, Storage, and Compute with Windows Server 2016</td>
<td>70</td>
</tr>
<tr>
<td>Networking with Windows Server 2016</td>
<td>70</td>
</tr>
<tr>
<td>Identity with Windows Server 2016</td>
<td>71</td>
</tr>
<tr>
<td>Automating Administration with Windows PowerShell</td>
<td>71</td>
</tr>
<tr>
<td>Terms and Conditions</td>
<td>72</td>
</tr>
</tbody>
</table>
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.

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.

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.

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.
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.

**Government Discounts**  
To take advantage of U.S. government discounts please call us at 978.250.4983. Our Registrars will be happy to assist you.

**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.

**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

<table>
<thead>
<tr>
<th># Courses</th>
<th>Total Cost</th>
<th>Cost Per Course</th>
<th>% Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>$4,290</td>
<td>$2,145</td>
<td>23%</td>
</tr>
<tr>
<td>3</td>
<td>$5,790</td>
<td>$1,930</td>
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<tr>
<td>4</td>
<td>$7,090</td>
<td>$1,772</td>
<td>36%</td>
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<tr>
<td>5</td>
<td>$8,290</td>
<td>$1,658</td>
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<tr>
<td>6</td>
<td>$9,490</td>
<td>$1,582</td>
<td>44%</td>
</tr>
</tbody>
</table>

If you are interested in taking a 5-day course and 3-day course, SST also offers an 8-day training pass for $3690.

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.
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

C#, Java, 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.


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.

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.


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
.NET Programming

C#, VB.NET, ASP.NET
Web Forms, MVC, MVC Core, Windows Forms, WF, WPF, WCF, Azure
**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 learn how to build ASP.NET Web Form applications and work with a variety of ASP.NET controls, including validation controls and user controls. Students also learn how to use ADO.NET to interact with databases and XML files. Students learn how to build and interact with simple WCF SOAP Web Services. Comprehensive labs provide the students with extensive experience creating and deploying dynamic ASP.NET Web Form sites.

**Duration:** 5 days

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


---

**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 learn how to build ASP.NET Web Form applications and work with a variety of ASP.NET controls, including validation controls and user controls. Students also learn how to use ADO.NET to interact with databases and XML files. Students also learn how to build and interact with simple WCF SOAP Web Services. Comprehensive labs provide the students with extensive experience creating and deploying dynamic ASP.NET Web Form sites.

**Duration:** 5 days

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

ASP.NET Web Forms Programming for Experienced C# Programmers

**Description:** This course provides students with hands on experience using Visual Studio to create dynamic web sites with the ASP.NET Framework using C#. Students will learn how to build ASP.NET Web Form applications and work with a variety of ASP.NET controls, including validation controls and user controls. Students explore why state management is difficult within web sites and learn many different ASP.NET techniques for managing state, including application, session and view state objects. Students also learn how to use ADO.NET to interact with databases and XML files. Other topics include: using a Web.config file to control application configuration; using master pages to provide a consistent look and feel to a web site; working with cookies; reading and writing files; and deploying ASP.NET applications. Comprehensive labs provide the students with extensive experience creating and deploying dynamic ASP.NET Web Form sites.

**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 web sites with the ASP.NET Framework using VB.NET. Students will learn how to build ASP.NET Web Form applications and work with a variety of ASP.NET controls, including validation controls and user controls. Students explore why state management is difficult within web sites and learn many different ASP.NET techniques for managing state, including application, session and view state objects. Students also learn how to use ADO.NET to interact with databases and XML files. Other topics include: using a Web.config file to control application configuration; using master pages to provide a consistent look and feel to a web site; working with cookies; reading and writing files; and deploying ASP.NET applications. Comprehensive labs provide the students with extensive experience creating and deploying dynamic ASP.NET Web Form sites.

**Duration:** 3 days

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

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 ASMX 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. 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 ASMX 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. 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)
Introduction to ASP.NET Core MVC

**Description:** 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. The discussion of the Model incorporates Microsoft technologies for persisting data, including XML Serialization and ADO.NET with SQL Server 2014. 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.


Windows Workflow Foundation Using C#

**Description:** Microsoft's Windows Workflow Foundation (WF) provides a framework for creating scalable applications consisting of independent program units called activities. This course covers WF 4.5 and uses Visual Studio 2015, which provides a visual designer for creating workflows. The course begins with an overview of the concepts of workflow and the programming model provided by WF. The essentials of WF programming are then covered followed by a systematic treatment of the major features of WF, including the Built-In Activity Library. Primitive and control flow activities are discussed, and the alternatives to hosting workflows are covered. Collection and parallel activities are covered. The creation of custom activities, both using the designer and code, is explained. Flowchart and state machine activities are covered. Persistence and bookmarks are discussed. Workflow Services, using Windows Communication Foundation (WCF) is covered. The course concludes with coverage of debugging, error handling, transactions and compensation. 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/windows-workflow-foundation-programming-course.htm](http://www.software-skills-training.com/Courses/windows-workflow-foundation-programming-course.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#. 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 ASMX 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)

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**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. 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 ASMX 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)
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. 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

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 VB.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 also learn how to use ADO.NET to interact with databases and XML files. 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
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#. 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 also learn how to build and interact with simple WCF SOAP Web Services. 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 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 also learn how to build and interact with simple WCF SOAP Web Services. 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 training course provides students with hands on experience using Visual Studio to create dynamic Windows Presentation Foundation (WPF) applications using 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 will learn the basics of XAML and how it, combined with C#, is used to describe the appearance and behavior of WPF applications. Students also learn how to use ADO.NET to interact with data sources and display data. Other topics include examining WPF controls, working with images and multimedia content, scaling, rotating and skewing UI elements, and using WPF's powerful data binding features. Comprehensive labs and exercises provide the students with experience creating and deploying 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 training course provides students with hands on experience using Visual Studio to create dynamic Windows Presentation Foundation (WPF) applications using VB.NET. This 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. Students will learn the basics of XAML and how it, combined with C#, is used to describe the appearance and behavior of WPF applications. Students also learn how to use ADO.NET to interact with data sources and display data. Other topics include examining WPF controls, working with images and multimedia content, scaling, rotating and skewing UI elements, and using WPF's powerful data binding features. Comprehensive labs and exercises provide the students with experience creating and deploying 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)
Description: This course provides students with hands-on experience using Visual Studio to create Windows Presentation Foundation (WPF) applications using 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 to 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 to build WPF applications. Students also learn how to work with audio and images, as well as performing simple animations. Other topics include: building menus, toolbars and status bars; using the ribbon control; 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: Prior experience with C# is required.


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Description: This course provides students with hands-on experience using Visual Studio to create Windows Presentation Foundation (WPF) applications using 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 to 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 WPF applications. Students also learn the basics of working with audio and images, as well as performing simple animations. Other topics include: building menus, toolbars and status bars; using the ribbon control; 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: Prior experience with VB.NET is required.

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. 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 Using VB.NET

**Description:** This course provides students with hands on experience using Visual Studio to create service-oriented applications using Windows Communication Foundation (WCF) and VB.NET. This 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. 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. 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-windows-communication-foundation.htm](http://www.software-skills-training.com/Courses/learn-windows-communication-foundation.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)

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WCF Programming for Experienced VB.NET Programmers

**Description:** This course provides students with hands on experience using Visual Studio to create service-oriented applications using Windows Communication Foundation (WCF) and VB.NET. 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 VB.NET is required.

**More Info:** [www.software-skills-training.com/Courses/web-service-application-training.htm](http://www.software-skills-training.com/Courses/web-service-application-training.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. Advanced object-oriented programming topics include auto-implemented properties, inheritance, abstract classes, sealed classes, and generics. 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. 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 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. 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)

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**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. Advanced object-oriented programming topics include auto-implemented properties, inheritance, abstract classes, sealed classes, and generics. 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. 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 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. 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. Students 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 then learn how to use jQuery's Ajax features to build more interactive MVC applications. The course covers use of the Entity Framework to provide a data access layer for an MVC application. Students will also learn how to use the Web API to build APIs that expose services and data via HTTP. 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.

**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. Students 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 then learn how to use jQuery's Ajax features to build more interactive MVC applications. The course covers use of the Entity Framework to provide a data access layer for an MVC application. Students will also learn how to use the Web API to build APIs that expose services and data via HTTP. 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.

**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)
Description: This course is intended for students who have experience building ASP.NET and C# applications. Students will also have experience with the Microsoft Azure platform and a basic understanding of the services offered. This course offers students the opportunity to take an existing ASP.NET MVC application and expand its functionality as part of moving it to Azure. This course focuses on the considerations necessary when building a highly available solution in the cloud.

Duration: 5 days

Prerequisites: Completion of the ASP.NET Web Forms Programming Using C# or equivalent experience. Students should also have a basic understanding of the Microsoft Azure platform.

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

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*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.
Mobile Application Programming

Android, iOS, Swift, Objective-C, Xamarin, Apache Cordova
Android™ Application Development

Description: This hands-on course conveys the fundamental skills necessary to deploy Android Apps on mobile devices such as phones and tablets. The course emphasizes proper layout of the user interface (UI), including how to add buttons, labels, textboxes, checkboxes, images and other widgets to the UI. Students will learn how to utilize Android's XML-based layout system, which builds the UI with containers and widgets, as well as how to set wallpapers and add menus to the UI. Students also learn how to handle screen rotation, and how to define UIs so they can adjust for different screen sizes. Coverage of data storage includes best practices for storing images and files. Student will also learn how to embed SQLite databases in Apps, and then use these databases to store and retrieve any kind of data. The course emphasizes Service Oriented Architecture (SOA). Students employ the Eclipse editor and the Android Developer Tools (ADT) plugin to perform comprehensive hands on exercises throughout the course to reinforce learning and develop real competency. Various alternative App development environments are compared to Eclipse, including Flex, Air and PhoneGap.

Duration: 5 days

Prerequisites: Prior experience with a scripting or programming language is required. Java skills are helpful but not required.

More Info: www.software-skills-training.com/Courses/android-programming-course.htm

iOS Programming for iPhone® and iPad® Applications Using Objective-C

Description: Participants in this hands-on course will learn about and gain practice developing iOS applications for iPhone and iPad devices. Attendees will learn all the basics needed for iOS development, from installation of the Xcode editor to the Apple approval process. The Objective-C language is presented and used in hands on exercises to learn how it interacts with the hardware systems. In hands on exercises, students will use built-in data views as well as create custom screens for data entry and presentation. Students will learn to follow Apple’s design recommendations to provide clean interfaces that appropriately size to various devices and screens. Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency. Students will create apps from the ground up, demonstrating the features of Objective-C and serving as an introduction to developing apps for release to the App Store.

Duration: 5 days

Prerequisites: Prior programming experience in an object-oriented language such as Java, C# or C++.

More Info: www.software-skills-training.com/Courses/mobile-programming-course.htm

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iPad® and iPhone® are trademarks of Apple Inc., registered in the U.S. and other countries.
Advanced iOS Programming for iPhone® and iPad® Applications Using Objective-C

**Description:** Students will develop apps to interact with many of the hardware systems available on iPhone, iPad and iPod Touch hardware devices. Students will learn how to use the camera and microphone for still images, videos and audio. The course includes coverage of the Core Location and Map Kit for GPS systems and the motion systems for the internal gyroscope system. Students will learn how to save and read files for local systems and how to use the Core Data system to create local SQLite databases. Students learn how iOS apps interact with Web services through request/response systems. Attendees also learn how to develop apps incorporating iCloud support, and the requirements for sharing documents. Comprehensive hands on exercises are integrated throughout to familiarize students with many of the hardware systems and concepts needed for iOS apps, as well as security concerns to address prior to launching iOS apps.

**Duration:** 5 days

**Prerequisites:** Strong experience with Objective-C programming language and basic iOS application development. The iOS Programming for iPhone and iPad Applications Using Objective-C course strongly recommended.

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

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Swift Programming for iPhone® and iPad® Applications

**Description:** In this hands on Swift 4 programming course, attendees will learn how to develop iPhone and iPad apps using Swift and Xcode. Students begin by learning the fundamentals of the Swift language. They will see how to effectively use advanced Swift features like generics, closures, and error handling. Students will use Storyboards to design user interfaces for iOS apps. They study how to configure view controller classes to interact with iOS views and controls (labels, text fields, buttons, segmented controls, switches, table views, etc.) using IBOutlets, create event handlers using IBActions and then code events handlers. Students also learn how to implement different types of custom table view cells. Students learn how to persist data using three different techniques: read and write local files on the device, make asynchronous calls to Web services and parse XML data from the HTTP response, and use Core Data to interact with local SQLite databases. Students examine how to work with images, as well use touch and gesture recognizers to respond to complex user interactions like pinch to zoom. They learn how to use tab bar controllers to build a multi view app. Throughout the course, students work with the Apple's Cocoa Touch UI Framework.

**Duration:** 5 days

**Prerequisites:** Prior programming experience in an object-oriented language.

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

*iPad* and *iPhone* are trademarks of Apple Inc., registered in the U.S. and other countries.
**Xamarin Cross-Platform Mobile Application Development**

**Description:** Students will learn how to use Xamarin as a cross-platform mobile development tool to build native Android and iOS apps using C# and a .NET code base. Students will begin by learning how to use Xamarin.Forms to build Android and iOS apps using a single code base. Students will learn how to use XAML to define the UI layer for all platforms. Coverage of XAML includes how to use XAML controls to interact with the use, how to use XAML to manage the UI layout, and how to connect UI events to C# event handlers. Students will learn how to interact with both local data stored on the device and how to communicate with, and process data from, RESTful services using Xamarin.Forms. In this course, students will learn how to install and configure Xamarin.Android, and then examine Android application architectures. Students will also learn how to install and configure Xamarin.iOS, and then examine native iOS application architectures. This course will also examine how to work with touch and location services for both Android and iOS devices.

**Duration:** 5 days

**Prerequisites:** C# programming experience.

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

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**Apache Cordova Cross-Platform Mobile Application Development**

**Description:** Apache Cordova (formerly PhoneGap) is an open-source is a mobile application development framework. It utilizes HTML5, CSS3 and JavaScript to create apps for a variety of mobile platforms. Students will learn how to build applications using jQuery Mobile and Apache Cordova that run on a variety of mobile platforms including iOS, Android and Windows Mobile. Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

**Duration:** 3 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/apache-cordova-training.htm](http://www.software-skills-training.com/Courses/apache-cordova-training.htm)
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 is recommended, but not required. The Website Development with HTML5, CSS and Bootstrap course provides a thorough introduction into the creation of a Website using HTML and CSS.

**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 HTML5, CSS3 and JavaScript. Attendees with little experience in HTML5/CSS3 should take the 5-day *Developing Rich Internet Applications Using HTML5, CSS3 and jQuery* course instead.

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

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**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. Attendees will use ThemeRoller for jQuery Mobile to download existing or custom theme swatches to format the appearance of a web site. 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 *Developing Rich Internet Applications Using HTML5, CSS3 and jQuery* 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 AngularJS

**Description:** Attendees will learn the fundamental skills necessary to build Web Applications using AngularJS and the MV* (Model View Whatever) design pattern. Topics include creating controllers, using scope to manage data, designing views/templates, routing, data binding and filters, applying directives, as well as form integration and validation. Students will also use AngularJS' built-in services to communicate with RESTful web services and provide CRUD database operations. Students will learn how to use CSS animations and Bootstrap to enhance the UI as well as learn to employ third-party components such as modal dialogs (“modals”), progress bars and navbars. In addition, students will learn to extend AngularJS with custom directives, services and filters. Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

This course introduces AngularJS 1.x. Students interested in Angular versions 2 through 6 should take the Developing Web Applications Using Angular course instead.

**Duration:** 4 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.

Developing Web Applications Using Angular

**Description:** This course introduces Angular versions 2 through 6. Students interested in Angular 1.x should take the Developing Web Applications Using AngularJS course instead.

This hands on programming course provides a thorough introduction to the Angular JavaScript Framework including coverage of versions 2 through 6. 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.

**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.

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

**Description:** 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 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)

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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 the Apache 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**

**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)

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**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)
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.

**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)

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SQL Server 2016 Reporting Services

**Description:** The 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. 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. The student will also gain experience with the new Report Services Web portal.

**Duration:** 3 days

**Prerequisites:** Familiarity with database concepts, Windows desktop navigation and software installation techniques. Attendance at SST’s *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:** Three of the five days are reserved for SSRS, with the remaining two days providing an introduction to SSIS and SSAS 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. 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 SSAS multidimensional (cube) model using MDX syntax. Cubes will be customized to include 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 SST’s *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)

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SQL Server 2016 Business Intelligence: Integration Services and Analysis Services

**Description:** The focus of this 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. 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 MDX and DAX. Cubes will be customized to include 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 SST’s *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)
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.

**Duration:** 5 days

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

**More Info:**

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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. 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.

**Duration:** 3 days

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

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

**Description:** This 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. 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.

**Duration:** 5 days

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

**More Info:**

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SQL Server 2017 Business Intelligence: Integration Services and Analysis Services

**Description:** The focus of this 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 the SQL Programming course or Microsoft Transact-SQL Programming course is highly recommended although not required.

**More Info:**
Microsoft SQL Server 2014 Administration

**Description:** Participants in this course will come away with the knowledge and experience required to administer SQL Server 2014. The course focuses on performing common administrative tasks, understanding how SQL Server works under the covers, and optimizing SQL Server performance as well as assuring high data availability. You will learn how to install, configure, manage, secure, automate, monitor, and optimize SQL Server 2014. 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. Emphasis is placed on how SQL Server 2014 is architected, so that you will be able to make the proper decisions in configuring and managing your SQL Server instances. Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

**Duration:** 5 days

**Prerequisites:** Familiarity with database concepts, Windows desktop navigation and software installation techniques. Attendance at SST’s *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-administration-course.htm](http://www.software-skills-training.com/Courses/sql-server-administration-course.htm)

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SQL Server 2014 Reporting Services

**Description:** This course begins with a discussion of the Reporting Services architecture and how to set up Reporting Services servers. Students will install and configure Reporting Services, and perform hands-on exercises where they create various types of reports, including basic table-based reports, parameterized reports, drilldown reports, linked reports, sub-reports, matrix reports (pivot tables), free-form reports and reports with charts and gauges. Students learn how to group data and add subtotals and totals to reports, as well as how to add custom calculations using the built-in functions or using custom functions written in .NET. The course ends with a complete overview of Report Server administration, including how to deploy and secure reports, how to schedule automatic report generation and delivery, how to backup reports, how to store previous copies of reports in history folders, and how to maintain and troubleshoot Report Servers.

**Duration:** 3 days

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

**More Info:** [www.software-skills-training.com/Courses/ssrs-training-course.htm](http://www.software-skills-training.com/Courses/ssrs-training-course.htm)
SQL Server 2014 Business Intelligence Application Development (SSRS, SSIS, SSAS)

**Description:** Students start by installing and configuring SQL Server 2014 servers that support SSRS, SSIS and SSAS. Hands-on exercises will be performed where they create various types of reports, including basic table-based reports, parameterized reports, drilldown reports, linked reports, sub-reports, matrix reports (pivot tables), free-form reports and reports with charts and gauges. Students also spend a full day completing hand-on exercises demonstrating SSIS features, including understanding the architecture of Integration Services projects and packages, as well as how to design and implement data integration routines using SSIS. The final day covers how to create data cubes using SSAS, which includes an overview of data warehouse design concepts and why data cubes typically pull their data from data warehouses. Hand-on exercises are performed that create, deploy, process and connect to data cubes.

**Duration:** 5 days

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


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SQL Server 2014 Business Intelligence: Integration Services and Analysis Services

**Description:** Students will install and configure SQL Server 2014 servers that are enabled for SSIS and SSAS, which are then used for comprehensive hands on exercises demonstrating key features of SSIS/SSAS. Students work with complex SSIS data migration projects that import/export data between multiple formats. The course provides thorough coverage of how to deploy, automate, secure and troubleshoot SSIS routines. Students will learn how to use SSAS to design, build and populate data warehouses to stage data for use by data cubes, and will perform hands-on exercises to design and build a data warehouse. The course also includes an overview of data mining and the tools available to do this in SSAS, supported by a hands-on exercise that walks through the process of defining a data mining structure to predict future sales.

**Duration:** 5 days

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

Java Programming
Java, Java EE, EJB, Spring, Hibernate
Java™ Programming

**Description:** This hands on course introduces experienced programmers to Java technology and Java programming techniques. 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. 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)

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**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, Java for COBOL Programmers*, 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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Web Application Development Using JEE™, Enterprise JavaBeans and JPA

Description: This hands-on course provides participants with the knowledge and experience required to develop and deploy Enterprise JavaBeans, Web Services and robust JEE web applications. This course starts with the basic concepts and APIs of EJB and then continues on with complex topics such as message driven beans and transactions. Newer concepts such as the use of annotations and the use of CDI / Dependency Injection to initialize references are covered in depth. The course also includes thorough coverage of managing persistence using the JPA2. Security, transaction management, inter-component communication and deployment issues are discussed in detail. The course includes content on how to expose EJBs as standards-based (JAX-WS, SOAP/Http) and REST-based web services. Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency with this complex technology.

Duration: 5 days

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

More Info: www.software-skills-training.com/Courses/java-ee-training.htm

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

Description: This course provides students hands on experience with 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. 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. 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. SST’s course Java Programming or equivalent knowledge provides a solid foundation.

More Info: www.software-skills-training.com/Courses/java-spring-course.htm

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Introduction to Spring 4, Spring MVC and Spring REST

**Description:** This course introduces the techniques for using the powerful capabilities of Spring 4 including 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 on using the powerful capabilities of Spring’s Core module to reduce coupling and increase the flexibility, ease of maintenance, and testing of your applications. Coverage also includes integrating persistence layers (e.g. Hibernate/JPA) with Spring, using Spring’s powerful Aspect Oriented Programming (AOP) to program cross-cutting concerns in a safe and maintainable way and using Spring’s declarative transaction capabilities. It also covers integration of Spring with Java EE Web applications. Comprehensive hands-on labs provide reinforcement of the topics covered in the course and practical experience deploying solutions.

**Duration:** 5 days

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

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

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Introduction to the Spring 4 Framework

**Description:** This course introduces the techniques for using the powerful capabilities of Spring 4 including 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 on using the powerful capabilities of Spring’s Core module to reduce coupling and increase the flexibility, ease of maintenance, and testing of your applications. Coverage also includes integrating persistence layers (e.g. Hibernate/JPA) with Spring, using Spring’s powerful Aspect Oriented Programming (AOP) to program cross-cutting concerns in a safe and maintainable way and using Spring’s declarative transaction capabilities. It also covers integration of Spring with Java EE Web applications. Comprehensive hands-on labs provide reinforcement of the topics covered in the course and practical experience deploying solutions.

**Duration:** 3 days

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

**More Info:** [www.software-skills-training.com/Courses/java-spring-framework-training-course.htm](http://www.software-skills-training.com/Courses/java-spring-framework-training-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. 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. This course is hands on with labs 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. The standard platform does all labs with the Eclipse IDE and the lab instructions include detailed directions for setting up and using it.

**Duration:** 5 days

**Prerequisites:** Java SE programming experience and an understanding of object-oriented design principles. SST’s 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 also covers integration of Spring with Java EE Web applications. This course is hands on with labs 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. The standard platform does all labs with the Eclipse IDE and the lab instructions include detailed directions for setting up and using it.

**Duration:** 3 days

**Prerequisites:** Java SE programming experience and an understanding of object-oriented design principles. SST’s 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)
Description: This course presents the key concepts and methodologies required to perform 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. 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. 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)
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 applications, site collections and sites. From there, students will add Web pages to sites and create navigation solutions for users to easily locate data. Students learn how to create new sites from scratch, as well as with built-in templates. Included are team sites, wikis, blogs, Web databases and meeting workspaces. 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. 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)

SharePoint 2013 Power User

**Description:** This 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 applications, site collections and sites. From there, students will add Web pages to sites and create navigation solutions for users to easily locate data. Students learn how to create new sites from scratch, as well as by built-in template. Included are team sites, wikis, blogs, web databases and meeting workspaces. Web parts and pages are then added to sites to provide greater flexibility in the way SharePoint is presented to users. 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-power-user-course.htm](http://www.software-skills-training.com/Courses/sharepoint-power-user-course.htm)
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)

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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)
**Description:** This hands-on Linux administration course teaches students how to install, configure and maintain an Enterprise Linux system in a networked environment. Students will learn to perform basic administrative tasks such as adding and managing users, creating and maintaining file systems, developing and implementing a security policy, as well as performing software installation and package management. Additionally, students will perform Linux network-related tasks, to include installing and supporting SSH, NFS, Samba, and the Apache Web server. Although the labs include installing and configuring a CentOS Red Hat Enterprise Linux system (students can choose version 6 or 7), much of the course content also applies to SuSE, Ubuntu, Oracle and other current versions of mainstream Linux distributions. Class participants will also discuss common security issues, and be introduced to several tools, such as PAM modules, that can help secure the operating environment. Upon completion of this course, students will be prepared to competently maintain a Linux system in a networked business environment. Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

**Duration:** 5 days

**Prerequisites:** Experience with common UNIX/Linux user-level commands, such as for moving, copying and editing files. 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)

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_The instructor was exceptional. He was patient, friendly and extremely knowledgeable. This course was well-designed and through. 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 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

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
**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)

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

-E.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.
Description: This hands-on XML programming class is a thorough introduction to using XML in a variety of practical applications using Java, .NET and JavaScript. The course covers structuring data with XML; validating data with document type definitions (DTDs) and XML Schemas; creating and viewing XML documents; transforming XML documents with the XML Stylesheet Language (XSL, XSLT and XPath); service-oriented architectures using SOAP and Web Services; accessing and editing XML data via the document object model (DOM) and Simple API for XML (SAX) libraries; mapping XML structures to and from databases and object-oriented languages. These techniques are then combined in client or server-based applications to deliver rich AJAX user interfaces with clear and modular code. Extensive examples in Java, ECMAScript (JavaScript) and .NET environments combined with comprehensive hands-on lab exercises reinforce the concepts being taught and introduce the practical application of XML to business problems.

Duration: 5 days

Prerequisites: Programming experience in an object-oriented language such as Java, JavaScript (JScript, ECMAScript) or C# is strongly recommended.

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

The instructor is wonderful! She conveyed the material clearly and with the right amount of detail. Plus she held my attention throughout the class.
- B.D.

The instructor is very knowledgeable. I enjoyed this training very much and gained a lot of useful information. I would love to take additional classes.
- J.G.
Project Management

- Project Management
- Time
- Cost
- Scope
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

"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. 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. Students will also examine TDD and refactoring legacy code in other languages like Java to gain a broader view of options and issues working in a multi-language shop. Comprehensive labs using C# provide facilitated hands on practice crucial to developing 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. 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. Students will also examine TDD and refactoring legacy code in other languages like C# to gain a broader view of options and issues working in a multi-language shop. Comprehensive labs using Java provide facilitated hands on practice crucial to developing competence and confidence with the new skills being learned.

**Duration:** 4 days

**Prerequisites:** Java SE 5+ 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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Windows Administration, PowerShell
Installation, Storage, and Compute with Windows Server 2016

**Description:** This course is designed primarily for IT professionals who have some experience with Windows Server. It is designed for professionals who will be responsible for managing storage and compute by using Windows Server 2016, and who need to understand the scenarios, requirements, and storage and compute options that are available and applicable to Windows Server 2016.

**Duration:** 5 days

**Prerequisites:** Students should have a basic understanding of networking fundamentals, an understanding of security best practices and AD concepts, basic knowledge of server hardware and experience supporting and configuring a Windows client operating system.

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

Networking with Windows Server 2016

**Description:** This course provides the fundamental networking skills required to deploy and support Windows Server 2016 in most organizations. It covers IP fundamentals, remote access technologies, and more advanced content including Software Defined Networking.

**Duration:** 5 days

**Prerequisites:** Completion of the *Installation, Storage, and Compute with Windows Server 2016* course or equivalent knowledge.

**More Info:** [www.software-skills-training.com/Courses/windows-server-networking-course.htm](http://www.software-skills-training.com/Courses/windows-server-networking-course.htm)
Identity with Windows Server 2016

**Description:** This course teaches how to deploy and configure Active Directory Domain Services (AD DS) in a distributed environment, how to implement Group Policy, how to perform backup and restore, and how to monitor and troubleshoot Active Directory related issues with Windows Server 2016. Additionally, this course teaches how to deploy other Active Directory server roles such as Active Directory Federation Services (AD FS) and Active Directory Certificate Services (AD CS).

**Duration:** 5 days

**Prerequisites:** Completion of the courses *Installation, Storage, and Compute with Windows Server 2016* and *Networking with Windows Server 2016* or equivalent knowledge.

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

Automating Administration with Windows PowerShell

**Description:** This course provides students with the fundamental knowledge and skills to use Windows PowerShell 4.0 for administering and automating administration of Windows based servers. Students will learn to execute and monitor scripts more efficiently through more robust session connectivity, workflow capabilities, enhanced job scheduling, and Windows PowerShell Web Access. Learn Windows PowerShell with greater ease through improved cmdlet discovery and simplified, consistent syntax across all cmdlets. Write Windows PowerShell scripts quicker and more intuitively through the new Integrated Scripting Environment (ISE) that enables script sharing, which connects IT pros to a larger Windows PowerShell user community. The course is built on Windows Server 2012 R2 and Windows 8.1 and while it is specifically focused on Windows PowerShell v4.0, is also relevant in v2.0 and v3.0 Windows PowerShell environments.

**Duration:** 5 days

**Prerequisites:** Previous Windows Server and Windows Client management knowledge and hands on experience. Experience installing and configuring Windows Server into existing enterprise environments, or as standalone installations. Knowledge and experience of network adapter configuration, basic Active Directory user administration, and basic disk configuration.

**More Info:** [www.software-skills-training.com/Courses/powershell-training-course.htm](http://www.software-skills-training.com/Courses/powershell-training-course.htm)
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.
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
- Android, iOS, Swift, Xamarin
- 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
- Windows Administration, PowerShell