Salesforce Certified Platform Developer

KSU Exam Preparation Guide

March 2016

Contents

Platform Developers on the Force.com Platform

As a Platform Developer with broad knowledge of custom application development, you use the right mix of declarative and programmatic capabilities to create custom applications for your company or clients.

With a Platform Developer credential, you'll demonstrate your ability to use the Force.com platform to the fullest. Your credentialed skills will be sought after by companies who want to unleash the potential of cloud computing.

If you know the programmatic and declarative capabilities of the Force.com platform inside and out, and are able to develop custom interfaces to extend Salesforce capabilities and develop custom business logic using Apex and Visualforce, you may be ready for the Platform Developer credentials.

The Study Guides for these credentials include a detailed listing of what the exams cover and what else you should know about becoming a Salesforce Certified Platform Developer I or Platform Developer II.

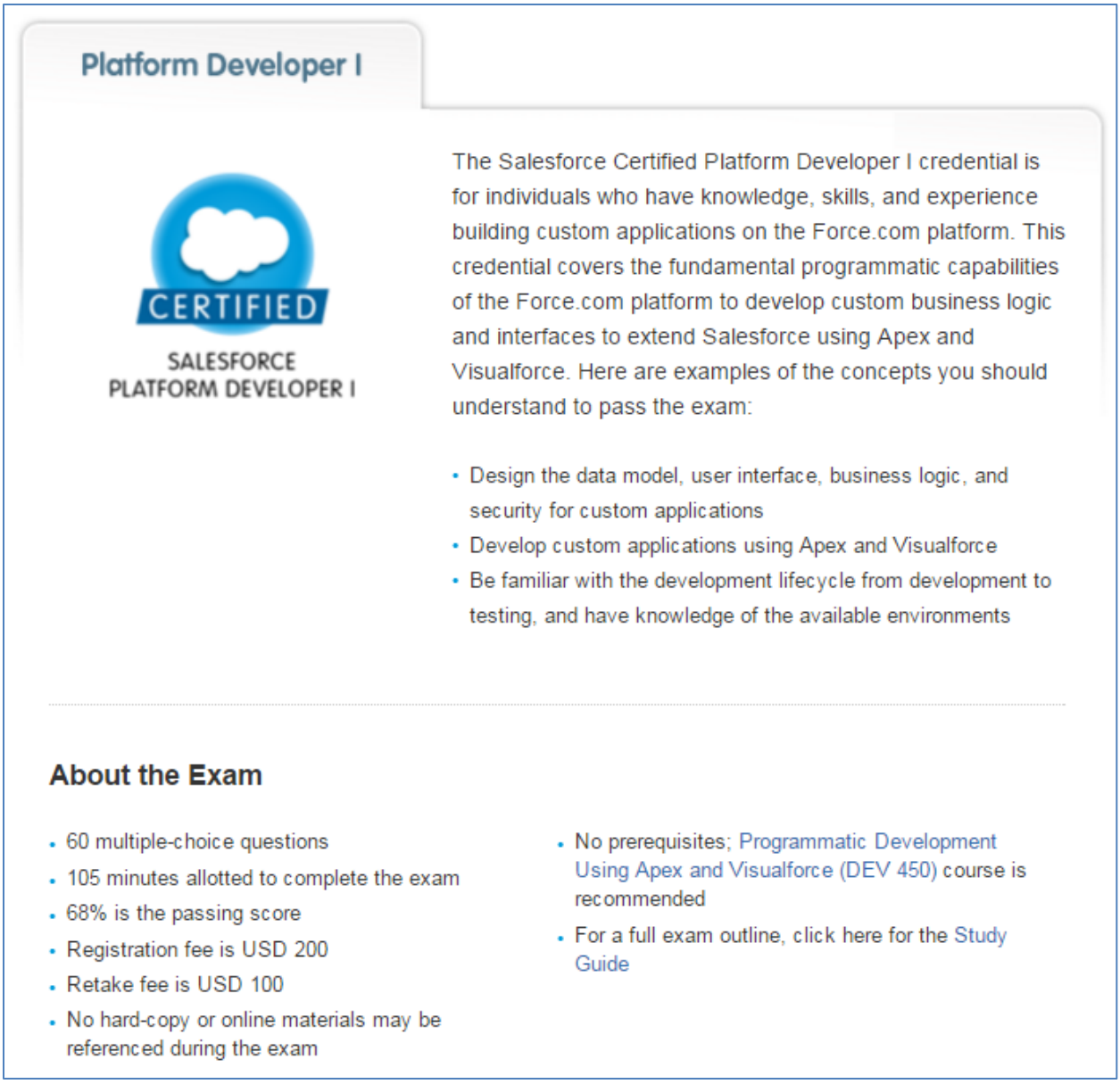
With a Salesforce Platform Developer Certification, you are granted permission to download the certified logo to use on business cards, email signatures, and professional networking sites. You will be required to maintain your credential by passing short online maintenance exams after each major Salesforce release. Release training and a release exam schedule will be provided to help you keep your credential.

This preparation guide will explain the recommended steps involved in preparing for the Platform Developer Certification Exam, and provide information on accessing various study tools and materials available to aid in learning the information needed to earn the certification.

About The Exam

Platform Developer I

The **Salesforce Certified Platform Developer I** generally has one to two years of experience as a developer and at least six months experience on the Force.com platform.



Platform Developer I

CERTIFIED
SALESFORCE
PLATFORM DEVELOPER I

The Salesforce Certified Platform Developer I credential is for individuals who have knowledge, skills, and experience building custom applications on the Force.com platform. This credential covers the fundamental programmatic capabilities of the Force.com platform to develop custom business logic and interfaces to extend Salesforce using Apex and Visualforce. Here are examples of the concepts you should understand to pass the exam:

- Design the data model, user interface, business logic, and security for custom applications
- Develop custom applications using Apex and Visualforce
- Be familiar with the development lifecycle from development to testing, and have knowledge of the available environments

About the Exam

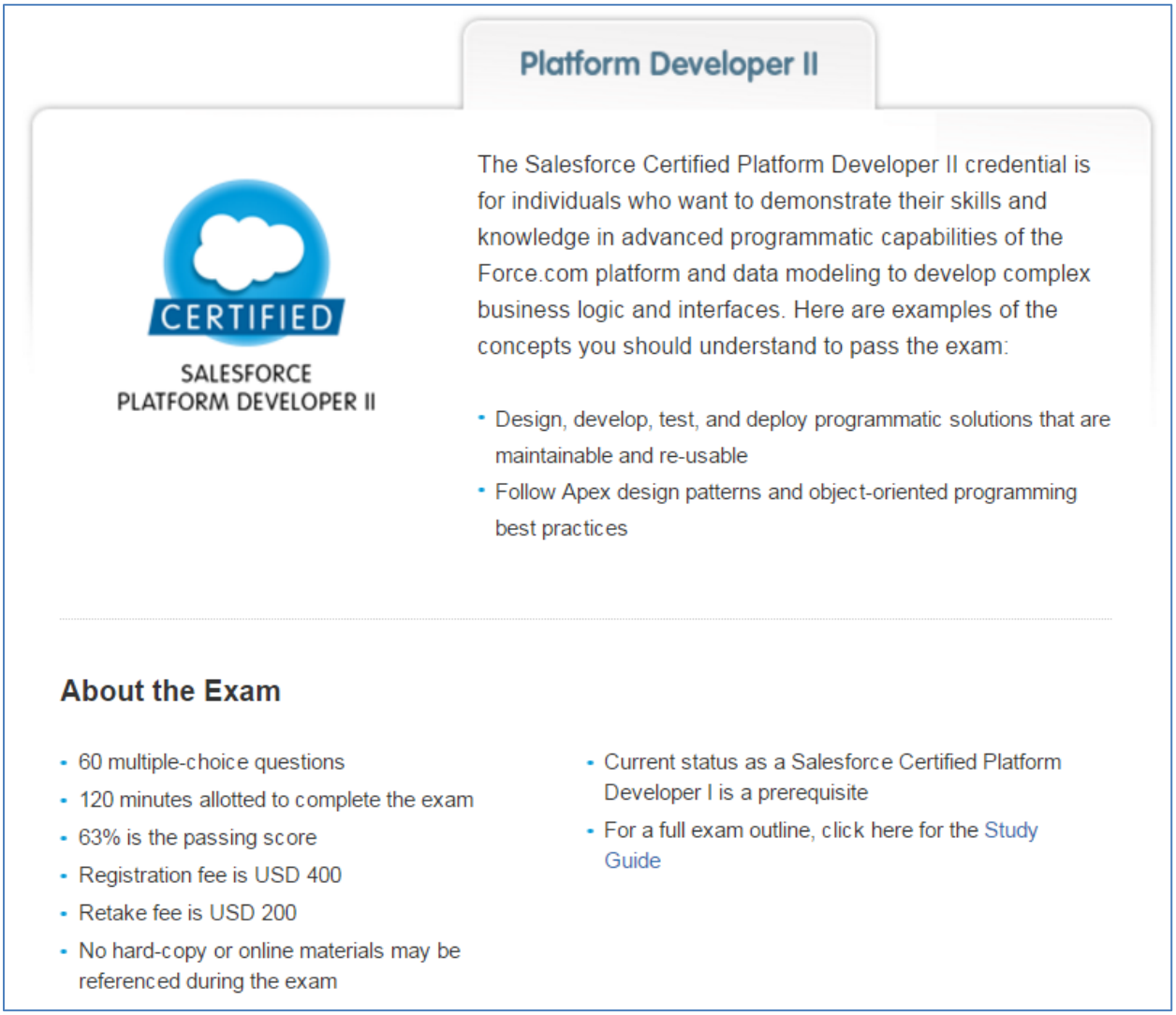
- 60 multiple-choice questions
- 105 minutes allotted to complete the exam
- 68% is the passing score
- Registration fee is USD 200
- Retake fee is USD 100
- No hard-copy or online materials may be referenced during the exam
- No prerequisites; Programmatic Development Using Apex and Visualforce (DEV 450) course is recommended
- For a full exam outline, click here for the Study Guide

http://certification.salesforce.com/platform-developers

The Salesforce Certified Platform Developer I Exam: A multiple-choice/multiple-select proctored exam of 60 questions. A score of 68% must be achieved to pass the exam.

Platform Developer II

The **Salesforce Certified Platform Developer II** generally has two to four years of experience as a developer, including at least one year of development experience on the Force.com platform.



Platform Developer II

CERTIFIED
SALESFORCE
PLATFORM DEVELOPER II

The Salesforce Certified Platform Developer II credential is for individuals who want to demonstrate their skills and knowledge in advanced programmatic capabilities of the Force.com platform and data modeling to develop complex business logic and interfaces. Here are examples of the concepts you should understand to pass the exam:

- Design, develop, test, and deploy programmatic solutions that are maintainable and re-usable
- Follow Apex design patterns and object-oriented programming best practices

About the Exam

- 60 multiple-choice questions
- 120 minutes allotted to complete the exam
- 63% is the passing score
- Registration fee is USD 400
- Retake fee is USD 200
- No hard-copy or online materials may be referenced during the exam
- Current status as a Salesforce Certified Platform Developer I is a prerequisite
- For a full exam outline, click here for the Study Guide

http://certification.salesforce.com/platform-developers

The Salesforce Certified Platform Developer II Exam: A multiple-choice/multiple-select proctored exam. This portion of the credential must be passed successfully to move on to the next portion, the programming assignment.

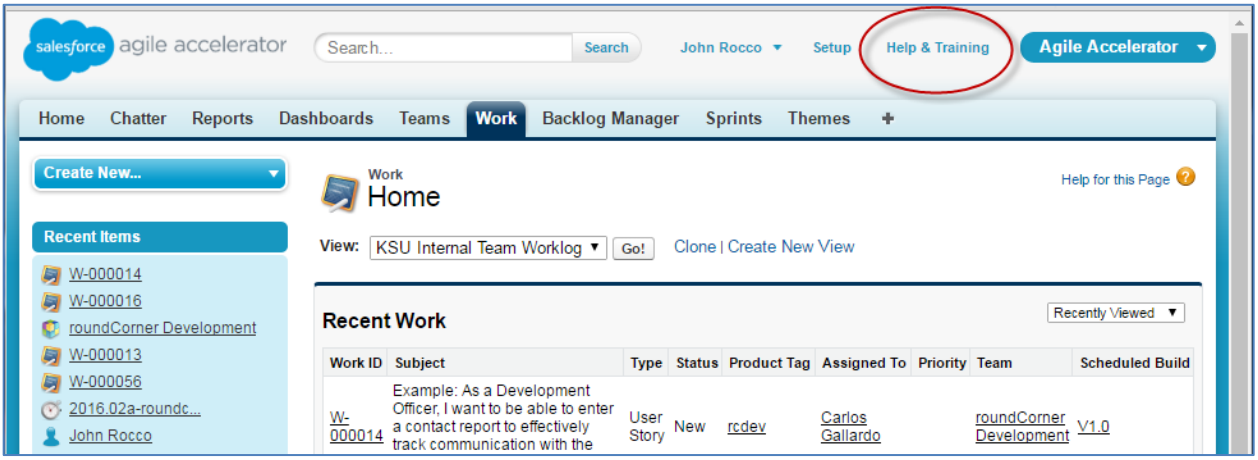
The Platform Developer II Programming Assignment: At scheduled times throughout the year; certification candidates who have passed the Salesforce Certified Platform Developer II exam will be given the opportunity to complete the second portion of the credential program: the programming assignment. A set of requirements and development parameters will be sent to the candidate, and the candidate will have a fixed amount of time to complete and submit the assignment. The candidate will be given the evaluation criteria and detailed instructions on how to complete and submit the final working application. The programming assignment is completed at the candidate's own pace and doesn't require working at a proctored site. However, there will be a deadline for assignment completion.

The Platform Developer II Essay Exam: Upon submission of the programming assignment, the candidate will be required to complete a short-answer proctored exam that covers the specifics of the programming assignment. The essay exam, in combination with the programming assignment, will be evaluated and scored as the final portion of the Salesforce Certified Platform Developer II certification program.

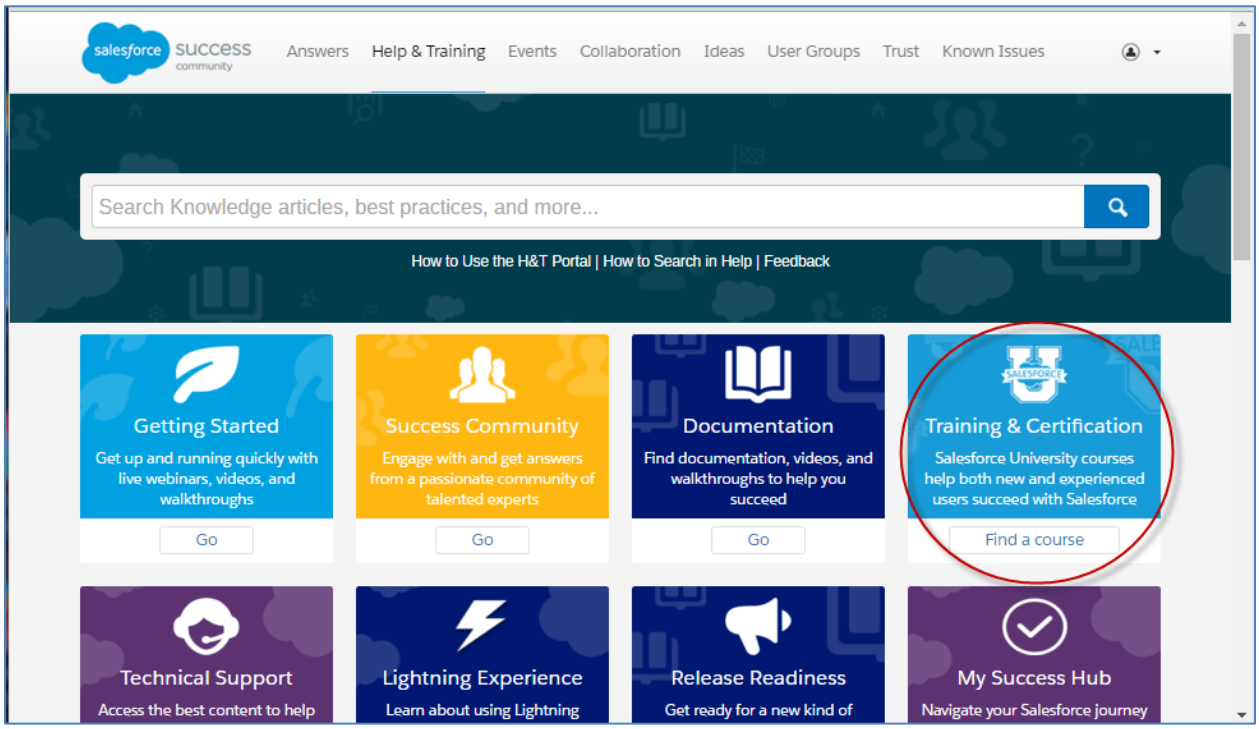
The Salesforce Certified Platform Developer II credential will be granted to a candidate upon successful completion of *all three parts* of the program.

Developer Training in Salesforce

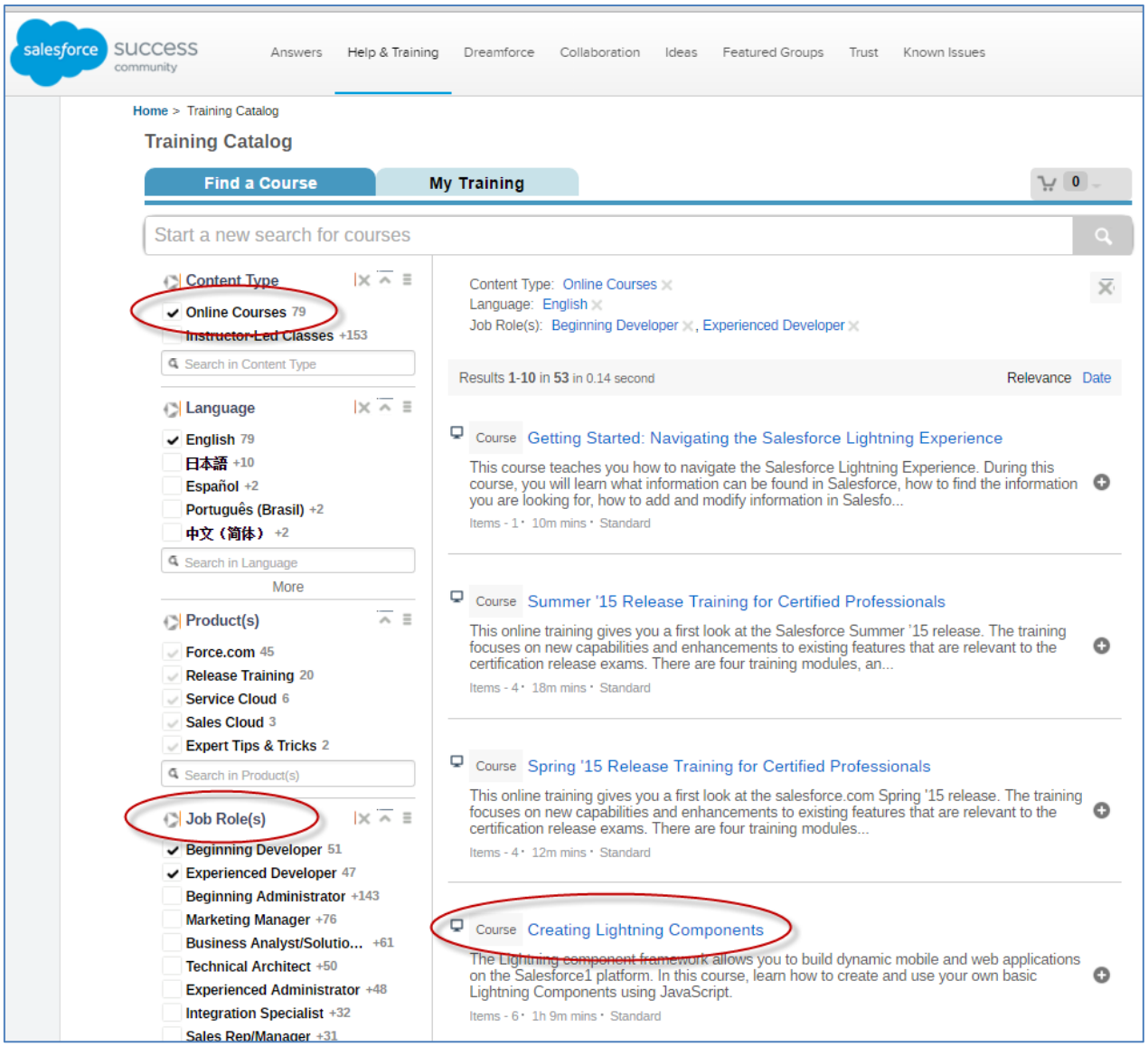
Once logged in, there are many training resources available through the Salesforce.com website.



The *Help & Training* link is located in the top right corner of the Salesforce.com web page.



Salesforce study courses and certification information may be accessed in the Help & Training Portal via the “Find a Course” link in the section for Training & Certification.



Many courses are available to increase user knowledge. Courses may be found by searching for key words, filtering by items such as course content type or job roles, or by scrolling through the many selections offered by Salesforce.com.

Recommended Training and References Developer I

As preparation for this exam, Salesforce University recommends a combination of: hands-on experience building custom applications using the declarative and programmatic capabilities of Apex code and Visualforce pages; training course completion; and self-study in the areas listed in the Exam Outline section of this study guide.

Salesforce University recommends the following book and instructor-led and online courses to guide your study:

- *Instructor-led course: Programmatic Development Using Apex and Visualforce (DEV-450)*
  *Note: Kent State University has purchased the online courses, and will not be scheduling any instructor-led sessions.
- *Study Guide - Salesforce Certified Platform Developer I Study Guide-Winter 2016*
- *Book: Force.com Fundamentals*
  https://developer.salesforce.com/page/Force_Platform_Fundamentals
- *Online course: Apex*
- *Online course: Visualforce Controllers*
- *Online course: Creating Lightning Components*
- *Workbook: Force.com Workbook*
- *Workbook: Apex Workbook*
- *Workbook: Visualforce Workbook*
- *Documentation: Development Lifecycle Guide*
- *Documentation: Force.com Apex Code Developer's Guide*
- *Documentation: Visualforce Developer's Guide*
- *Documentation: Force.com Migration Tool Guide*
- *Trailhead: Modules for Developer Trail - Beginner (See attachment #1)*

Launch online training from your Salesforce application by clicking the **Help & Training** link in the upper right corner of the screen (requires login) and searching for the desired courses, listed above.

In addition, Salesforce University recommends reviewing online Documentation, Tip Sheets, and User Guides by searching for the topics listed in the Exam Outline section of the Study Guide and studying the information related to those topics. Documentation, Tip Sheets, and User Guides can also be accessed through Help & Training. Documentation is also available in PDF format here: https://na1.salesforce.com/help/pdfs/en/sf.pdf.

On-Line Courses – Developer I

Salesforce University Online Courses

Salesforce University courses are separated into modules to allow for learning and studying in sections. Each module contains various tools to offer different educational methods.

Presentation – Each module will include a presentation to deliver detailed information about the module subject. They will vary in length depending upon the complexity of the subject. The presentations may include intermittent Knowledge Checks to act as a brief review of the information and to assure understanding of the subject matter.

Knowledge checks – Knowledge Checks are brief, basic questions of understanding that may appear within a presentation or at the end of the module. They are quick assessments of subject comprehension designed to restate the module information and assist in learning. If the questions are answered incorrectly, the appropriate response and reasoning are explained, and the user may opt to repeat the question and amend their answer.

Tasks – Many sections within the presentations and modules include hands-on opportunities to apply the material by including tasks to be accomplished labeled, "Your Turn to Practice". These will vary in estimated length of time to accomplish depending upon the subject. The practical assignments are delivered through a "Resources" tab found to the left of the presentation.

The Salesforce University recommended courses are estimated as follows:

Apex

	Modules	Presentation (mins)	Knowledge Checks	Practical Assignments	
				Tasks	Estimated Time (hrs)
	Introduction to the Recruiting Application	6:18	0	0	0:00
0	Introduction to Force.com	17:04	3	2	0:15
1	Introduction to Apex	26:20	1	3	0:25
2	Data types and Logic	20:34	1	1	0:30
3	Object-Oriented Programming in Apex	20:45	1	0	0:00
4	Records in the Database	42:53	1	3	1:05
5	Implementing Triggers	35:00	1	4	1:55
6	Exceptions, Debugging, and Testing	24:43	1	1	0:30
7	Deploying Apex Code	17:33	1	1	0:20
8	Working with Web Services	26:18	1	3	1:40
9	Receiving and Sending Emails Through Apex	26:02	1	1	0:50
10	Advanced Topics	17:23	1	4	1:45
		4:40:53			**9:15**

Approximate time for completion 14-16 Hours

Visualforce Controllers

	Modules	Presentation (mins)	Knowledge Checks	Practical Assignments	
				Tasks	Estimated Time (hrs)
	Introduction to the Recruiting Application	6:18	0	0	0:00
0	Introduction to Force.com	17:04	3	2	0:15
1	Overview of Visualforce	10:56	1	1	0:15
2	Visualforce Standard Controllers	7:25	1	0	0:00
3	Visualforce Controller Extensions and Custom Controllers	45:03	1	4	4:10
4	Further Visualforce Controller Topics	26:16	1	3	3:40
		1:53:02			**8:20**

Approximate time for completion 10-13 Hours

Creating Lightning Components

	Modules	Presentation (mins)	Knowledge Checks	Practical Assignments	
				Tasks	Estimated Time (hrs)
	Introduction to Lightning Components	18:08	0	4	1:00
0	Component Markup and Style	7:59	0	0	0:00
1	Binding to an Apex Method	15:58	0	0	0:00
2	Using Nested Components	6:10	0	0	0:00
3	Raising and Handling Events: Part One	13:28	0	0	0:00
4	Raising and Handling Events: Part Two	8:14	0	0	0:00
		1:09:57			**1:00**

Approximate time for completion 2-3 Hours

Apex

Learn all about Apex and how this object-oriented, on-demand programming language differs from other programming languages you have used in the past. Designed for those who already have an understanding of the declarative (point-and-click) features of Force.com, this course includes lessons on when and how to use Apex, specifics on syntax and other language features, and hands-on exercises that allow you to apply these tools in real-world scenarios.

MODULE	DESCRIPTION
Introduction to the Recruiting Application	Get an introduction and overview to the Recruiting Application that is used in the examples and class exercises.
Introduction to Force.com	This training introduces you to the Force.com platform features and functionality.
Introduction to Apex	Get an introduction to Apex and discover what this on-demand programming language is capable of, what makes it different from other programming languages, how it works with the Force.com IDE, and where it can be authored and executed.
Data Types and Logic	Discover the different data types available in Apex, including the very useful collection types. Learn the syntax for basic logic structures, as well as how they should be used to achieve best performance when programming in the cloud.
Object-Oriented Programming in Apex	Learn the basics around creating classes in the cloud. Understand how the class and method access modifiers differ from other programming languages. Ensure that you are providing the appropriate level of record-access by leveraging on the existing Force.com sharing model.
Records in the Database	Find out how the Force.com platform handles sObject relationships and how to use those within Apex. Learn how to retrieve and submit data to the Force.com database and discover the basics of working with data sets in the cloud.
Implementing Triggers	Triggers are unique to Force.com and can execute when any data is saved. Learn about the different types of Apex triggers and the context for which to use each of them. Specifics include creating and executing triggers, and the proper syntax and variables to use with them.
Exceptions, Debugging, and Testing	Ensure that your code runs smoothly by learning about the Apex error handling framework, and learn how to expand that framework with custom exceptions. Learn about the various tools available to you for debugging code as well as creating the required, environment-independent unit tests that must be created in order to deploy your code.
Deploying Apex Code	Find out all about migrating your Apex code from the development environment into a production environment. Learn about the tools available for deployment and the various sandboxes available for development. Details include specific deployment steps, and tips for training end users in the new production environment.
Working with Web Services	Learn all about creating your own custom Web Services for handling inbound requests as well as Apex callouts for making outbound calls to external Web Services.
Receiving and Sending Emails Through Apex	Create a Salesforce email service for handling inbound messages. Learn to send outbound messages directly from Force.com. This module includes thorough setup instructions, as well as information about creating debugging and email logs.
Advanced Topics	Continue to hone your Apex skills with these advanced topics. Subjects include Dynamic Apex, Visualforce controllers, Apex schedulers, and custom settings objects that can be used to store configuration data.

Visualforce Controllers

Combine your previous knowledge of Visualforce pages and Apex classes to create Visualforce controllers. Using controllers, you can start creating advanced interfaces to handle custom data sets or actions for a richer user experience.

MODULE	DESCRIPTION
Introduction to the Recruiting Application	Get an introduction and overview to the Recruiting Application that is used in the examples and class exercises.
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Overview of Visualforce	Refresh your memory on the basics of programming Visualforce components. Review syntax for tagging, binding, and expressions.
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Visualforce Controller Extensions and Custom Controllers	Learn when and how to use the extra functionality provided by two additional Visualforce constructs: extensions to standard controllers and custom controllers.
Further Visualforce Controller Topics	Explore additional topics related to Visualforce controllers, including: creating wizards to simplify lengthy tasks; using the keyword "transient" to easily reference non-persisted data; and using dynamic Visualforce to create permutations of Visualforce pages; and testing Visualforce pages.

Creating Lightning Components

The Lightning component framework allows you to build dynamic mobile and web applications on the Salesforce1 platform. In this course, learn how to create and use your own basic Lightning Components using JavaScript.

MODULE	DESCRIPTION
Introduction to Lightning Components	Learn about the Lightning Component Framework, and build a very simple Hello World application.
Component Markup and Style	Learn how to modify a Lightning Component's style and presentation.
Binding to an Apex Method	Learn how to bind a Lightning Component to a method on an Apex controller in order to fetch Salesforce data.
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- *Trailhead: Modules for Developer Trail - Intermediate (See Attachment #2)*

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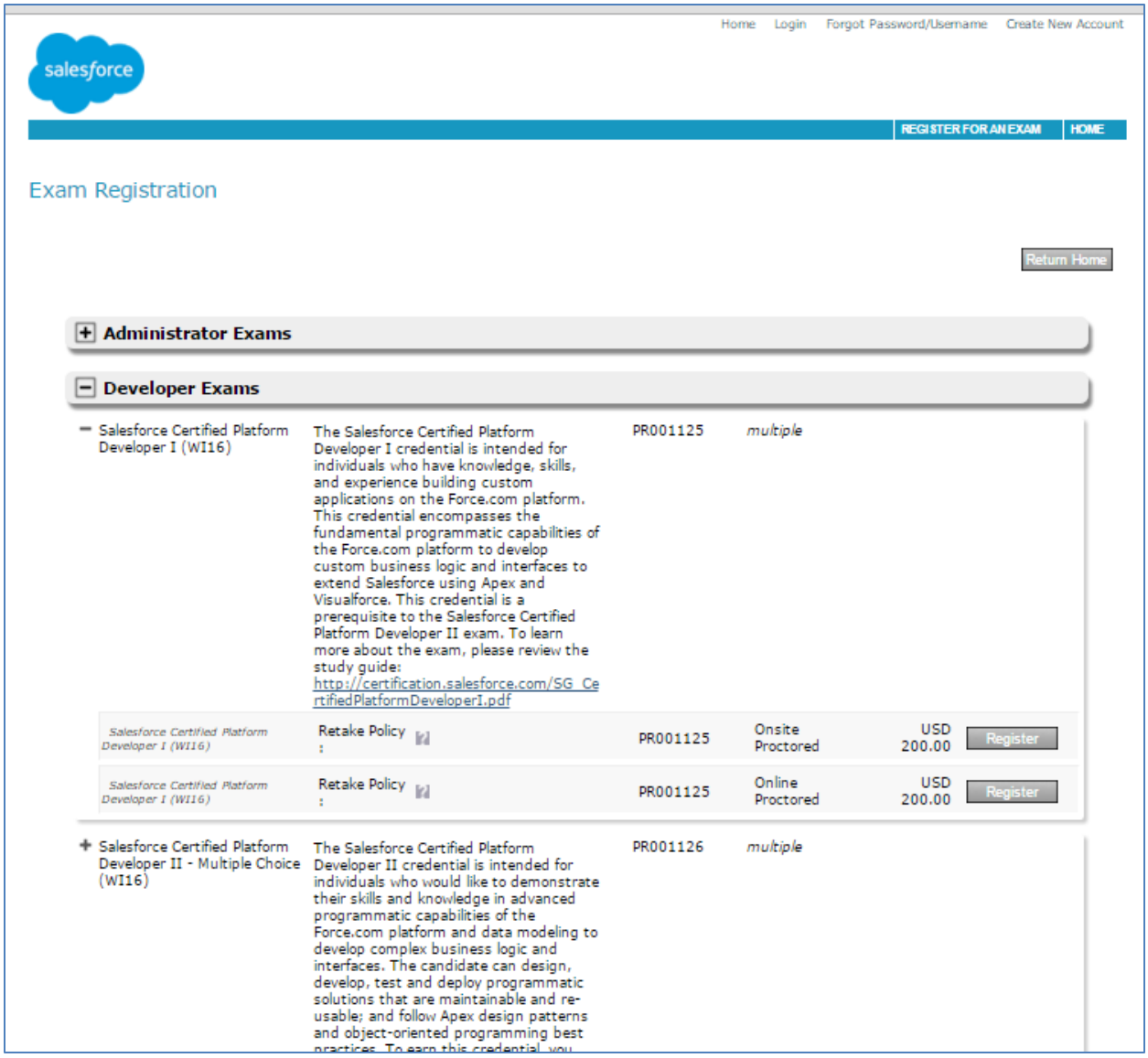
Taking the Exam

The exam can be scheduled by registering at webassessor.com or by visiting the site at: https://www.webassessor.com/wa.do?page=enterCatalog&branding=SALESFORCE&tabs=111



From the available options, select the appropriate exam to be taken and click on the “Register” button for the ***Online Proctored*** exam.

Maintaining a Certification

Successful completion of online, release-specific Salesforce Certified Platform Developer I and Platform Developer II exams is required to maintain this credential. Release exams are published three times a year for each of the Salesforce product releases throughout the year. The initial cost of the certification includes the Salesforce Certified Platform Developer exam plus two online release exams. In subsequent years, an annual maintenance fee will be charged when registering for every third release exam, to keep the certification current. The maintenance fee includes the three release exams and access to the supporting training material. Salesforce Certified professionals will be notified automatically when new release training material and exams become available