I	Module	Competency Unit	Elements	Schedule Date	Actual Date	Don
	Module07	STCESADJ2EE 701	Introducing Spring	20/01/2019	31/01/2019	
			nverting Control or Injecting Dependencies?.,Evolution of Dependency Injection. Beyond Dependency Injection .,Aspect-Oriented Programming with Spring.,Spring Expression Language (SpEL),Validation in Spring . Accessing Data in Spring. Object/XML Mapping (OXM) in Spring in Spring . Managing Transactions ,Simplifying and Integrating with JEE MVC in the Web Tier Remoting Support. Mail Support 8 Job Scheduling Support Dynamic Scripting Support. Simplified Exception Handling			
2	Module07	STCESADJ2EE 701	2.Getting started Spring & Sample Application Getting Started ,The Sample Application Obtaining the Spring Framework,Understanding Spring Packaging,The Spring MVC Showcase Application The Spring MVC Basic and Ajax Application ,Security and Authentication. Viewing Blog Entries. Posting Blog Entries Commenting on a Blog Entry . Filtering Out Obscenities Attaching Files to a Blog Entry or Comment Auditing Blog Actions. Upload Blog from an XML File Implementing SpringBlog Development Tool and Dependency Management Application Design Application Configuration Management	21/01/2019	02/02/2019	
1	Module07	STCESADJ2EE 701	3.Introducing IoC and DI in Spring Inversion of Control and Dependency Injection, Types of Inversion of Control, Dependency Pull, Injection., Inversion of Control in Spring., Dependency Injection with Spring Beans and BeanFactories BeanFactory Implementations ApplicationContext Contextualized Dependency Lookup, Constructor DependencyInjection., Setter Dependency Injection vs. Lookup, Setter Injection vs. Constructor. Configuring ApplicationContext	22/01/2019	04/02/2019	
	Module07	STCESADJ2EE 701	Spring Configuration Options (XML and Java AnnotationsmBasic Configuration Overview Declare Spring Components . Using Setter Injection Using Constructor Injection Avoiding Constructor Confusion Injection ParametersInjecting Simple Values Injecting Values Using SpEL Injecting Beans in the Same XML Unit Injection and ApplicationContext Nesting. Using Collections for Injection . Using Method Injection . Lookup Method Injection Method Replacement	23/01/2019	05/02/2019	
	Module07	STCESADJ2EE 702	Spring Configuration in Detail Spring's Impact on Application Portability. Bean Life-Cycle Management Hooking into Bean Creation. Execute a Method When a Implementing the InitializingBean Interface Using JSR-250 @PostConstruct Annotati Making Your Beans "Spring Aware". Using the BeanNameAware Interface Using the ApplicationContextAware Interfac Use FactoryBeans Custom FactoryBean Example: The MessageDigestFactoryBean Accessing a FactoryBean Directly Using the factory-bean and factory-method Attribute	24/01/2019		
	Module07	STCESADJ2EE 702	Introducing Spring AOP AOP Concepts Types of AOP. Static AOP Dynamic AOP Choosing an AOP Type AOP in Spring."Hello World!" in AOP Spring AOP Architecture Joinpoints in SpringAspects in Spring About the ProxyFactory Class Creating Advice in Spring Interfaces for Advice Create Before AdviceSecuring Method Access Using Before AdviceCreating After-Returning AdviceCreating Around Advice Creating Throws Advice Choosing an Advice Type	26/01/2019		
7	Module07	STCESADJ2EE 702	Advisors and Pointcuts in Spring The Pointcut InterfaceAvailable Pointcut Implementations Using DefaultPointcutAdvisor Creating a Static Pointcut Using StaticMethodMatcherPointcut Creating a Dynamic Pointcut Using DyanmicMethodMatcherPointcut Using Simple Name Matching Creating Pointcuts with Regular Expression Creating Pointcuts with AspectJ Pointcut Expression Creating Annotation Matching Pointcuts Convenience Advisor Implementations Understanding Proxies	27/01/2019		
3	Module07	STCESADJ2EE 702	Spring JDBC Support Sample Data Model for Example Code Exploring the JDBC InfrastructureSpring JDBC Infrastructure Overview and Used PackagesDatabase Connections and DataSources Embedded Database Support Using DataSources in DAO Classes Exception HandlingThe JdbcTemplate Class Initializing JdbcTemplate in a DAO Class	28/01/2019		
9	Module07	STCESADJ2EE 702	16.Using Hibernate in Spring Create a Hibernate Utility Project in Sample Data Model for Example CodeConfiguring Hibernate SessionFactory ORM Mapping Using Hibernate Annotations Simple Mappings One-to-Many Mappings Many-to-Many MappingsThe Hibernate Session InterfaceDatabase Operations with Hibernate	31/01/2019		
10	Module07	STCESADJ2EE 702	17.Using Hibernate in Spring Query Data Using Hibernate Query LanguageSimple Query with Lazy Fetching Query with Associations Fetching Inserting Data Updating Data Deleting Data Considerations of Using Hibernatte	02/02/2019		
11	Module07	STCESADJ2EE 704	Introducing JPA 2Creating a Simple Spring JPA Utility Project in STS Sample Data Model for Example Code Configuring JPA EntityManagerFactory ORM Mapping Using JPA Annotations Eliminating the DAO Layer Injecting EntityManager into Service Layer Classes Database Operations with JPA Query Data Using the Java Persistence Query Language Query with Untyped Results Query for a Custom Result Type with a Constructor Expression Inserting Data Updating Data Deleting Data Native Query Simple Native Query Native Query with SQL Resultset Mapping Criteria Query Using the JPA 2 Criteria API	04/02/2019		
12	Module07	STCESADJ2EE 703	19.Designing and Implementing Spring-Based Applications why Design to InterfacesThe Factory Pattern Drawbacks of the Basic Factory Pattern Externally Configurable Factories. Supporting Multiple Implementations Transparently Supporting Multiple Instantiation Modes. Impact of Spring on Interface-Based Design Building a Domain Object Model Spring and the Domain Object Model Why Create a Domain Object Model Modeling Domain Objects Database Modeling and Domain Object ModelingModeling Domain Object Relationships To Encapsulate Behavior or NotThe SpringBlog Domain Object Model Domain Object Model Summary Designing and Building the Data Access Layer DAO Interfaces 1	05/02/2019		
13	Module07	STCESADJ2EE 705	20.Validation with Type Conversion and Formatting Creating a Project in STS for SamplesSpring Type Conversion SystemConversion from a String Using PropertyEditors Introducing Spring 3 Type ConversionImplementing a Custom ConverterConfiguring ConversionService Converting Between Arbitrary Types Field Formatting in Spring 3Implementing a Custom Formatter Configuring ConversionServiceFactoryBean Validation in Spring Using Spring Validator Interface Using JSR-303 Bean Validation Defining Validation Constraints on Object	06/02/2019		
14	Module07	STCESADJ2EE	Using JSR-303 Bean Validation Defining Validation Constraints on Object PropertiesConfiguring Bean Validation Support in Spring Creating a Custom ValidatorUsing AssertTrue for Custom Validation Considerations for Custom Validation Which Validation API to Use? Validation with Type Conversion and Formatting in the Sample Application. 21.Web Applications with Spring	07/02/2019		
15	Module07	705 STCESADJ2EE	Introducing MVC and Spring MVC Introducing MVC Introducing Spring MVC Spring MVC WebApplicationContext Hierarchy Spring MVC Request Life Cycle Spring MVC Configuration Create the First View in Spring MVC Web Applications with Spring	09/02/2019		
		705	Configure the DispatcherServlet Implement the ContactControllerImplement the Contact List View Testing the Contact List View Template Layout Design Implement Page Layout ComponentsConfigure Tiles in Spring MVC Implement the Views for Contact InformationMapping of URLs to the Views Implementing the Show Contact ViewImplementing the Edit Contact ViewImplementing the Add Contact ViewEnable JSR-303 Bean Validation Using jQuery and jQuery UI			
16	Module07	STCESADJ2EE 705 STCESADJ2EE	Web Applications with Spring Introducing jQuery and jQuery UI Enable jQuery and jQuery UI in a View Rich-Text Editing with CKEditor Data Grid with Pagination using jqGrid Enable jqGrid in the Contact List ViewEnable Pagination on the Server Side File Upload HandlingConfiguring File Upload Support Modify Views for File Upload Support Spring Web Flow and JSF	10/02/2019		
		705	Introducing JSF View Model Interaction Navigation Application Life Cycle The Sample Spring Web Flow Application Design of the Sample Flow Project StructureSpring Web Flow and JSF Configuration Adding Required Dependencies Configuring JSF Configuring Web Deployment DescriptorConfiguring Spring Web Flow and Spring MVC Implementing the Sample Flow			
18	Module07	STCESADJ2EE 705	Introducing JSF View Model Interaction Navigation Application Life Cycle The Sample Spring Web Flow Application Design of the Sample Flow Project StructureSpring Web Flow and JSF Configuration Adding Required Dependencies Configuring JSF Configuring Web Deployment DescriptorConfiguring Spring Web Flow and Spring MVC Implementing the Sample Flow	12/02/2019		
19	Module07	STCESADJ2EE 706	Introducing JSF View Model Interaction Navigation Application Life Cycle The Sample Spring Web Flow Application Design of the Sample Flow Project StructureSpring Web Flow and JSF Configuration Adding Required Dependencies Configuring JSF Configuring Web Deployment DescriptorConfiguring Spring Web Flow and Spring MVC Implementing the Sample Flow	13/02/2019		
20	Module07 Module07	STCWPSI 704 STCESADJ2EE	27.Introduction to iReport.Building Your First Report iReport features Downloading and installing iReport Creating a connection/data source Building your first report Viewing and exporting the report 28.Report Layout and Formatting, Using Variables	14/02/2019		
22	Module07	708 STCESADJ2EE	Setting up the report pages Configuring bands, formatting reports and elements Reviewing the database tables Creating a basic report Adding variables "29.Using Parameters, Grouping Data in Reports"	17/02/2019		
22	Module07	STCWPSI 704	Adding parameters in the SalesDetails report Using more than one parameter Building a Group by report Modifying group properties Managing report groups "30.Subreports,Crosstab Reports "	18/02/2019		
24	Module07	STCWPSI 708	creating a subreport Returning values from the subreport Using an existing report as a subreport Compiling a report Creating a crosstab report 31.Charting, Calling Reports from Java Applications	19/02/2019		
		200	Charting, Calling Reports from Java Applications			