

Training: Capstone Courseware  
115 JavaServer Faces

FORM OF TRAINING	MATERIALS	PRICE	DURATION
Traditional	Hardcopy	1150 EUR	5 days
Traditional	CTAB Tablet	1250 EUR	5 days
Distance learning	Hardcopy	1150 EUR	5 days
Distance learning	CTAB Tablet	1150 EUR	5 days

## LOCATIONS

Krakow - 5 Tatarska Street, II floor, hours: 9:00 am - 4:00 pm

Warsaw - 17 Bielska Street, hours: 9:00 am - 4:00 pm

## TRAINING GOALS:

Version 2.0

This comprehensive course shows **Java programmers** how to build **web applications** with **JavaServer Faces 2.0**. We develop the best-practice concepts that are formalized by the JSF architecture, from **model/view/controller** to the UI component framework and request-handling lifecycle. Students start to discover that there is a "JSF way" of doing things, and we learn not just APIs and tag libraries but the habit of slicing application logic into its most reusable forms: managed beans, event listeners, converters, validators, and more.

Students acquire a firm command of JSF development, learning to work with JSF's list and table components, building reusable composite components, and building Ajax applications. Simple, high-level Ajax functionality is covered, and students also work more directly with **JSF's JavaScript API** and resource-management framework.

## CONSPECT:

- Chapter 1. Overview
  - Java EE and Web Applications
  - Perspectives: Servlets and JSP
  - Perspectives: MVC Frameworks
  - Perspectives: AWT and JFC
  - JSF Value Proposition
  - JSF Configuration

- Issues with JSP and JSF
- Facelets
- Chapter 2. Lifecycle
  - The JSF Request/Response Cycle
  - Lifecycle Phases
  - Phase Listeners
  - The FacesContext Class
  - Who Does What
  - Partial Request Cycles
- Chapter 3. UI Components
  - The UIComponent Class
  - Behavioral Interfaces
  - The Core and HTML Tag Libraries
  - Relationship to CSS
  - ID, Client ID, and Label
  - UISelectItem(s)
  - Navigating the UI Tree
  - The binding Attribute
- Chapter 4. Page Navigation
  - View Selection
  - Navigation Rules
  - Implicit Navigation
  - Problems with POSTback
  - Post/Redirect/Get
  - Support for HTTP GET
  - Conditional Navigation
- Chapter 5. Managed Beans
  - JavaBeans and JSF
  - Backing Beans
  - Configuring Managed Beans
  - @ManagedBean and Related Annotations
  - The Unified Expression Language
  - Value and Method Expressions
  - Implicit Objects
- Chapter 6. Scopes
  - Managed-Bean Scopes

- Lifecycle Annotations
- View Parameters
- The Flash
- Chapter 7. Dependency Injection
  - Managed Properties
  - Values, Lists, and Maps
  - Using Dynamic Expressions
  - Dependencies and Bean Scopes
  - The @ManagedProperty Annotation
- Chapter 8. Facelets
  - Migrating from JSP
  - View Definition Languages
  - Facelets
  - Tag Libraries
  - Writing and Using Custom Tags
- Chapter 9. Events and Listeners
  - JSF Event Model
  - Event Types and Timing
  - Event Queueing
  - ActionEvent and ActionListener
  - Action Methods
  - Connecting Controllers to Beans
  - ValueChangeEvent and ValueChangeListener
  - Deferring Event Processing
  - Limitations of FacesListeners
- Chapter 10. Lists and Tables
  - Working with Collections
  - Why We Don't Use
  - vs.
  - Defining Columns and Facets
  - One Command Per Row
  - Reading the Row Number
  - Pseudo-Maps
  - Working with Persistent Data
  - Concurrency and Caching
  - Limiting the Scope of Queries

- Paging
- Chapter 11. Converters
  - The Converter Interface
  - Life of a Datum
  - Standard Converters
  - Custom Converters
  - The @FacesConverter Annotation
  - Timing of Conversion
  - Representing Persistent Objects by ID
- Chapter 12. Validators
  - The Validator Interface
  - Standard Validators
  - Using Regular Expressions
  - Producing Error Messages
  - Message Keys
  - Presenting Error Messages
  - Posting Error Messages from Anywhere
  - Custom Validators
  - The @FacesValidator Annotation
  - Validating Multiple Inputs
  - JSR-303 Support: "Bean Validation"
- Chapter 13. Resources
  - Resource Libraries
  - Deploying Images, Scripts, and Stylesheets
  - Addressing Resources
- Chapter 14. Composites
  - Limitations of Custom Tags
  - Composite Components
  - Encapsulation
  - Deploying and Using Composites
  - Interface and Implementation
  - Impact on the UI Tree
  - Attributes
  - Retargeting
- Chapter 15. Ajax
  - What is Ajax?

- The XMLHttpRequest Object
- Ajax and the JSF Lifecycle
- Using
  - execute and render Attributes
  - Ajax Listeners
- Chapter 16. The JSF JavaScript API
  - The JSF JavaScript API
  - Triggering Ajax Requests
  - Refining with Callbacks
  - onEvent and onError Attributes
  - The Ajax Request/Response Process
  - Using Hidden Inputs
  - Other JavaScript Functions

## REQUIREMENTS:

**General note:** This course is intended primarily for experienced **Java application developers**. Page authors, component developers, and others who may have little or no Java experience (but perhaps are stronger on **HTML**, **JavaScript**, and **JSP**) may well find this to be a valuable training experience, though without solid Java skills many of the coding exercises will be difficult to follow.

- **Java programming** experience is essential to understanding the JSF API as presented here - Course 103 is excellent preparation.
- General understanding of servlets and **JSP** is recommended, but not required - consider courses Course 110 and Course 112.
- Basic knowledge of XML will be helpful, as will any previous experience with HTML.

## Difficulty level



## CERTIFICATE:

The participants will obtain certificates signed by Capstone Courseware.

## TRAINER:

Authorized Capstone Courseware Trainer.