

**NVCC COLLEGE-WIDE COURSE CONTENT SUMMARY  
ITP 246 – JAVA: SERVER-SIDE PROGRAMMING (4 CR.)**

**Course Description**

Provides instruction in application and integration of web-based clients and server-side java to three-tier business applications. Course content will use tools UML, XML, Java servlets, JSPs, and JDBC database access. Lecture 4 hours per week.

**Prerequisites/Co-requisites**

ITP 120

**Course Objectives**

Upon completion of this course, the student will be able to:

- Use UML, XML, Java servlets, JSPs, and JDBC database access
- Create integrated server-side web pages in Java utilizing J2EE concepts including entire e-Commerce shopping cart based web applications

**Course Content**

- Review of XHTML, JavaScript data validation, and cascading style sheets.
- XML, DTDs, schemas, and XSLT
- Servlets
- JSPs
- Custom Tag Libraries
- Integration of tools into MVC best practices web sites

**Student Learning Outcomes**

**Review of XHTML, JavaScript data validation, and cascading style sheets**

- Understand the concepts of XHTML
- Understand how to use cascading style sheets for content presentation
- Demonstrate knowledge of data validation with JavaScript

**XML, DTDs, schemas, and XSLT**

- Be able to describe XML's place in server-side programming
- Understand how to validate XML files with DTDs and schemas
- Demonstrate knowledge of data format conversions using extensible style sheet language transformations

**Servlets**

- Be able to read the APIs for J2EE applications
- Understand how data is passed to servlets and how to retrieve information from html files
- Understand scope, life cycles, request and response headers
- Understand how to use servlets for cookies and session tracking

## **Java Server Pages**

- Understand JSP best practices
- Understand expressions, scriptlets, page directives, and declarations

## **Custom Tag Libraries**

- Understand how to create a custom JSP tag
- Understand advantages of using custom JSP tags
- Describe the potential problems of threading

## **Integration of tools into MVC best practices web sites**

- Describe the MVC model and the part that JSPs, servlets, beans, and XML play in the model
- Understand how to pass data between the tools and the ramifications of scope
- Understand how shopping carts work and how MVC can be used for creating integrated server-side projects
- Understand how connection pooling is used for database access