

## **Course Syllabus Part I**

### **CSD 430 Server-Side Development**

**3 credit hours**

---

#### **Course Description**

This course introduces principles of programming for the World Wide Web (WWW) using Java technologies. Jakarta Enterprise Edition (EE) specifications governing these principles will be examined in detail. Students will develop client-server web applications that handle user requests over the web. The REpresentational State Transfer (RESTful) API architectural style will be explored. Students will also use CREATE, READ, UPDATE and DELETE (CRUD) operations for creating and managing data elements, examine security aspects of Jakarta, and build a code repository for their projects.

#### **Course Prerequisites**

CSD 420 Advanced Java Programming and CSD 340 Web Development with HTML and CSS

---

#### **Course Skills**

- Write and use JSPs
  - Create and test Jakarta Enterprise Edition (EE) web applications
  - Develop JavaBeans and Implement them into a web Application
  - Write JSPs and JavaBeans that access a DBMS
  - Use each of four essential operations of CRUD
- 

#### **Course Objectives**

1. Demonstrate procedures for developing a JEE application.
  2. Understand and use four essential operations of CRUD
  3. Work with the Model-View-Controller (MVC) design pattern for separating the data, presentation and the Graphical User Interface (GUI).
  4. Configure a Jakarta EE compliant container, an interface between web components and the web server.
  5. Use JSPs and servlets to implement a working example of Java's Database Connectivity (JDBC) Application Programming Interface (API).
  6. Demonstrate Java's packaging and web archiving techniques to create a Web Archive (WAR) file.
-

## Grading Scale

<u>Letter Grade</u>	<u>Percentage Grade</u>	<u>Letter Grade</u>	<u>Percentage Grade</u>
A	≥ 92.5%	C	< 76.5% and ≥ 72.5%
A-	< 92.5% and ≥ 89.5%	C-	< 72.5% and ≥ 69.5%
B+	< 89.5% and ≥ 86.5%	D+	< 69.5% and ≥ 66.5%
B	< 86.5% and ≥ 82.5%	D	< 66.5% and ≥ 62.5%
B-	< 82.5% and ≥ 79.5%	D-	< 62.5% and ≥ 59.5%
C+	< 79.5% and ≥ 76.5%	F	< 59.5%

---

## Topic Outline

- I. EE Compliant Container
  - a. Container installation
  - b. Environment variable
  - c. EE container initiation
- II. JSPs and Beans
  - a. Syntax
  - b. Compilation
  - c. Deployment
- III. JDBC
  - a. Registration/Loading a JDBC driver
  - b. JDBC connection Opening
  - c. JDBC statement Creation
  - d. JDBC statement Execution
- IV. WAR Files
  - a. WAR File Creation
  - b. WAR File Deployment
- V. MVC Applications
  - a. Model
  - b. View
  - c. Controller