

SOUTHEAST COMMUNITY COLLEGE
CONSTRUCTION MANUFACTURING AND TECHNOLOGY DIVISION
Computer Information Technology Program
Revision Date: August 21, 2023

I. CATALOG DESCRIPTION

Course Number: INFO2514
Course Title: Java Server Programming
Prerequisite(s): INFO1411, INFO1414, INFO1431, and MATH1020 or higher
Catalog Description: This course covers the development of server-side web applications using the Java programming language. Topics include servlets, Model-View-Controller architecture, and database access.

Credit Hours: 3
Class Hours: 45
Lab Hours: 0
Total Contact Hours: 45

II. COURSE OBJECTIVES: *Course will:*

- A. Introduce the Servlet class.
- B. Demonstrate using the Model View Controller pattern for Java web applications.
- C. Present using the Expression Language to create dynamic JavaServer Pages.
- D. Explore the tags in the Java Standard Tag Library.
- E. Demonstrate the uses of sessions and cookies.
- F. Demonstrate incorporating databases in a Java web applications.
- G. Introduce user authentication using tomcat and database realms.
- H. Develop collaboration skills with group programming projects

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

- A. Student Learning Outcomes: *Student will be able to:*
 - 1. Design servlets to form responses from http requests.
 - 2. Explain the individual parts of the Model View Controller pattern.
 - 3. Develop Java web applications in the Model View Controller pattern.
 - 4. Create dynamics views using JavaServer Pages.
 - 5. Use the Java Standard Tag Library to enhance JavaServer Pages.
 - 6. Demonstrate iterating through collections using Scriptlets and with the JSTL.
 - 7. Use sessions to maintain state in a web application.
 - 8. Design Java web applications that can Create, Read, Update, and Delete information from databases.
 - 9. Use authentication realms to restrict access to parts of a web application.
- B. General Education Learning Outcomes (GELOs)
 - 1. GELO #3: Critical Thinking & Problem Solving
Outcome 2: Synthesize information to arrive at reasoned solutions to problems.

IV. CONTENT/TOPICAL OUTLINE

- A. Servlets
 - 1. Printing HTML
 - 2. Forwarding requests
- B. The Model View Controller pattern
- C. JavaServer Pages, Scriptlets, and the Expression Language
- D. Java Standard Tag Library

- E. Sessions and cookies
- F. Database access with Java
- G. User authentication with Realms

V. INSTRUCTIONAL MATERIALS

- A. Required Text(s): Murach and Urban, *Java Servlets and JSP*, (Refer to CID and/or instructor for current edition)
- B. Other Resources:
 - 1. Required software available as a free download
 - 2. Computer and Internet access

VI. METHODS OF PRESENTATION/INSTRUCTION

- A. Methods of presentation typically include a combination of the following:
 - 1. Technology enhanced lectures
 - 2. Engaged learning activities

VII. METHODS OF EVALUATION

- A. Methods of evaluation, although determined by the individual instructor, traditionally includes a combination of the following:
 - 1. Attendance and/or participation activities
 - 2. Unit activities
 - 3. Programming assignments
 - 4. Group projects
 - 5. Tests and quizzes

VIII. SPECIFIC COURSE REQUIREMENTS

- A. This course will not qualify as a prerequisite if the student receives a final grade below a C (70%).