

Washtenaw Community College Comprehensive Report

CPS 278 Java Spring Framework Effective Term: Spring/Summer 2022

Course Cover

College: Business and Computer Technologies
Division: Business and Computer Technologies
Department: Computer Science & Information Technology
Discipline: Computer Science
Course Number: 278
Org Number: 13410
Full Course Title: Java Spring Framework
Transcript Title: Java Spring Framework
Is Consultation with other department(s) required: No
Publish in the Following: College Catalog , Time Schedule , Web Page
Reason for Submission: Course Change
Change Information:

Consultation with all departments affected by this course is required.

Course title

Course description

Pre-requisite, co-requisite, or enrollment restrictions

Outcomes/Assessment

Objectives/Evaluation

Rationale: Revising the course to use the most recent technologies used in the industry.

Proposed Start Semester: Fall 2021

Course Description: In this course, students will learn about Java Spring Framework. Topics include: Inversion of Control (IoC), Spring MVC (model-view-controller), Hibernate CRUD operations (create, read, update and delete), and Spring REST (representational state transfer). Students will learn how to develop a real time project with Spring MVC, Hibernate and Spring REST. Students taking this class should have a good knowledge of Java Fundamentals. Some knowledge of database and simple HTML is not mandatory but highly recommended. The title of this course was previously Java Server Programming.

Course Credit Hours

Variable hours: No

Credits: 4

Lecture Hours: Instructor: 60 **Student:** 60

Lab: Instructor: 0 **Student:** 0

Clinical: Instructor: 0 **Student:** 0

Total Contact Hours: Instructor: 60 **Student:** 60

Repeatable for Credit: NO

Grading Methods: Letter Grades

Audit

Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

College-Level Math

Level 4

Requisites

Prerequisite

CPS 161, minimum grade "B-"

or

Prerequisite

CPS 261, minimum grade "B-"

General Education

General Education Area 7 - Computer and Information Literacy

Assoc in Arts - Comp Lit

Assoc in Applied Sci - Comp Lit

Assoc in Science - Comp Lit

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Setup and create Spring MVC Projects.

Assessment 1

Assessment Tool: Outcome-related programming exercise

Assessment Date: Fall 2024

Assessment Cycle: Every Three Years

Course section(s)/other population: All sections

Number students to be assessed: All students

How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: 80% of the students will score above 70% on the exercise

Who will score and analyze the data: Department faculty

2. Use Hibernate to do CRUD operations.

Assessment 1

Assessment Tool: Outcome-related programming exercise

Assessment Date: Fall 2024

Assessment Cycle: Every Three Years

Course section(s)/other population: All sections

Number students to be assessed: All students

How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: 80% of the students will score above 70% on the exercise

Who will score and analyze the data: Department faculty

3. Create Spring REST application programming interfaces (APIs).

Assessment 1

Assessment Tool: Outcome-related programming exercise

Assessment Date: Fall 2024

Assessment Cycle: Every Three Years

Course section(s)/other population: All sections

Number students to be assessed: All students

How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: 80% of the students will score above 70% on the exercise

Who will score and analyze the data: Department faculty

4. Develop a real time project with Spring MVC, Hibernate and Spring REST.

Assessment 1

Assessment Tool: Outcome-related programming exercise

Assessment Date: Fall 2024

Assessment Cycle: Every Three Years

Course section(s)/other population: All sections

Number students to be assessed: All students

How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: 80% of the students will score above 70% on the exercise

Who will score and analyze the data: Department faculty

Course Objectives

1. Recognize and apply the features and benefits of Spring MVC.
2. Create a Spring MVC application.
3. Validate user input.
4. Recognize and apply Hibernate and Java Database Connectivity (JDBC).
5. Set up a Hibernate development environment.
6. Configure Hibernate with Annotations.
7. Create, read, query, update, and delete objects with Hibernate.
8. Use one-to-one, one-to-many and many-to-many mapping.
9. Recognize RESTful web services.
10. Convert Java plain old Java object (POJO) to JavaScript Object Notation (JSON) and vice versa.
11. Use the exception handling mechanism.
12. Use REST API to execute CRUD operations.

New Resources for Course

Course Textbooks/Resources

Textbooks

Manuals

Periodicals

Software

Equipment/Facilities

Computer workstations/lab

Data projector/computer

<u>Reviewer</u>	<u>Action</u>	<u>Date</u>
Faculty Preparer: <i>Jai Bai</i>	<i>Faculty Preparer</i>	<i>Jul 08, 2021</i>
Department Chair/Area Director: <i>Cyndi Millns</i>	<i>Recommend Approval</i>	<i>Jul 12, 2021</i>
Dean: <i>Eva Samulski</i>	<i>Recommend Approval</i>	<i>Jul 14, 2021</i>
Curriculum Committee Chair: <i>Randy Van Wagnen</i>	<i>Recommend Approval</i>	<i>Nov 29, 2021</i>
Assessment Committee Chair:		

Shawn Deron

Recommend Approval

Nov 30, 2021

Vice President for Instruction:

Kimberly Hurns

Approve

Nov 30, 2021

Washtenaw Community College Comprehensive Report

CPS 278 Java Server Programming

Effective Term: Fall 2015

Course Cover

Division: Business and Computer Technologies

Department: Computer Instruction

Discipline: Computer Science

Course Number: 278

Org Number: 13410

Full Course Title: Java Server Programming

Transcript Title: Java Server Programming

Is Consultation with other department(s) required: No

Publish in the Following: College Catalog , Time Schedule , Web Page

Reason for Submission: Course Change

Change Information:

Consultation with all departments affected by this course is required.

Course description

Pre-requisite, co-requisite, or enrollment restrictions

Outcomes/Assessment

Objectives/Evaluation

Rationale: Prerequisite change

Proposed Start Semester: Fall 2015

Course Description: In this course, students will learn about Java Servlets, Java Server Pages (JSP), JSTL, Expression Language, Tag Libraries and Java Database Connectivity (JDBC). Students taking this class should have a good knowledge of Java Fundamentals. Some knowledge of simple HTML and SQL is helpful but not mandatory. This course was previously CIS 278.

Course Credit Hours

Variable hours: No

Credits: 4

Lecture Hours: Instructor: 60 Student: 60

Lab: Instructor: 0 Student: 0

Clinical: Instructor: 0 Student: 0

Total Contact Hours: Instructor: 60 Student: 60

Repeatable for Credit: NO

Grading Methods: Letter Grades

Audit

Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

College-Level Math

Requisites

Prerequisite

CPS 161 minimum grade "B-"

General Education

General Education Area 7 - Computer and Information Literacy

Assoc in Arts - Comp Lit
Assoc in Applied Sci - Comp Lit
Assoc in Science - Comp Lit

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Identify Java Servlet programming techniques.

Assessment 1

Assessment Tool: Multiple choice and short answer questions on a departmental exam

Assessment Date: Fall 2016

Assessment Cycle: Every Three Years

Course section(s)/other population: All sections

Number students to be assessed: All students

How the assessment will be scored: answer key

Standard of success to be used for this assessment: 70% of the students who take the exam will score better than 70%.

Who will score and analyze the data: Departmental faculty

2. Identify Java Server Page (JSP) programming techniques.

Assessment 1

Assessment Tool: Multiple choice and short answer questions on a departmental exam

Assessment Date: Fall 2016

Assessment Cycle: Every Three Years

Course section(s)/other population: All sections

Number students to be assessed: All students

How the assessment will be scored: answer key

Standard of success to be used for this assessment: 70% of the students who take the exam will score better than 70%.

Who will score and analyze the data: Departmental faculty

3. Identify JDBC programming techniques to access online databases.

Assessment 1

Assessment Tool: Multiple choice and short answer questions on a departmental exam

Assessment Date: Fall 2016

Assessment Cycle: Every Three Years

Course section(s)/other population: All sections

Number students to be assessed: All students

How the assessment will be scored: answer key

Standard of success to be used for this assessment: 70% of the students who take the exam will score better than 70%.

Who will score and analyze the data: Department faculty

4. Create dynamic HTML and web pages using Java Servlet, JSP and the basic capabilities of JDBC.

Assessment 1

Assessment Tool: Programming Exercise

Assessment Date: Fall 2016

Assessment Cycle: Every Three Years

Course section(s)/other population: All sections

Number students to be assessed: Random sample of 25% of all students with a minimum of one full section

How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: 70% of the students will successfully complete the exercise

Who will score and analyze the data: Department faculty

Course Objectives

1. Create dynamic HTML pages utilizing Java Servlet classes.

Matched Outcomes

1. Identify Java Servlet programming techniques.
2. Utilize JSP to create Dynamic Web pages.

Matched Outcomes

3. Use the basic capabilities of the java JDBC class for accessing databases.

Matched Outcomes

3. Identify JDBC programming techniques to access online databases.

New Resources for Course

Course Textbooks/Resources

Textbooks

Manuals

Periodicals

Software

Equipment/Facilities

Computer workstations/lab

Data projector/computer

Reviewer

Action

Date

Faculty Preparer:

Clem. Hasselbach

Faculty Preparer

Feb 19, 2015

Department Chair/Area Director:

John Trame

Recommend Approval

Feb 20, 2015

Dean:

Kimberly Hurns

Recommend Approval

Feb 25, 2015

Vice President for Instruction:

Bill Abernethy

Approve

Mar 26, 2015