

**AUSTIN COMMUNITY COLLEGE
CONTINUING EDUCATION**

Part III: Java Programming

(24 hours)

ITSE 1072

COURSE SYLLABUS

Course Description: Java III will concentrate on the Swing components introduced in Java 2. The Swing components are an enhancement to the Abstract Window Toolkit (AWT) components which have been covered in previous courses. This course is a hands-on, practical look at creating more sophisticated Java programs utilizing the functionality of the Swing components. Students will learn how to create GUI menu systems and use Swing components to create frames, labels, borders, buttons, check boxes, radio buttons, combo boxes, text fields, text areas, file choosers, color choosers, internal frames, menu bars, tool bars, tabbed panes and sliders. Event processing code for each of the components is demonstrated. Students also learn how to read and write to files using the FileReader Class and other supporting classes. The course introduces Java Database Connectivity (JDBC) and Remote Method Invocation (RMI). **Prerequisites:** Java Programming Part II or comparable knowledge and experience.

Objectives: Every student will be able to:

- Install Java on a PC or MAC
- Use Swing JFrames and JLabels in an application.
- Implement Helper Classes in an application.
- Create component borders.
- Create a Java application using JButtons.
- Use Radio Buttons and Check boxes.
- Create text fields, text areas and password fields.
- Create menu bars and tabbed panes.
- Use tool bars, tables and sliders.
- Create applets using Swing components.
- Explain the use of and need for Remote Method Invocation.
- Explain the use of and need for Java Database Connectivity.

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Rationale: The World Wide Web, using HTML only, is a static medium. In order to introduce interactivity to a Web site it is necessary to use computer programs for this interactivity. The Java programming language can be used on Web sites in the form of Java applets to provide this interactivity to static Web pages. Additionally, Java programmers will benefit from learning how to write robust Java applications that can be deployed on a variety of operating systems. Webmasters increasingly will need to know how to implement both applets and applications, and the Java programming language is a fundamental method of achieving this goal.

Evaluation: Students will be evaluated using online exams and programming assignments.

Course Outline:

- I. Introduction to Swing (6 hours)
 - A. Containment
 - B. Helper Classes
 - C. Borders
 - D. JButtons
 - E. JCheckboxes

- II. Swing II (6 hours)
 - A. JRadioButtons
 - B. ButtonGroups
 - C. RadioListeners
 - D. Combo Boxes
 - E. Text Fields
 - F. Password Fields
 - G. TextAreas
 - H. Option Panes
 - I. Dialogs
 - J. File Choosers
 - K. Color Choosers

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- III. Swing III (6 hours)
 - A. Internal Frames
 - B. Menu Bars
 - C. Menu Items
 - D. Tool Bars
 - E. Tabbed Panes
 - F. Tables
 - G. Sliders

- IV. Section IV (6 hours)
 - H. File I/O
 - I. Parsing Data
 - J. FileReaders
 - K. Applets
 - L. Remote Method Invocation
 - M. Java Database Connectivity

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Student Assessment Checklist:

At the completion of the course each student will be able to:

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