

**AUSTIN COMMUNITY COLLEGE
CONTINUING EDUCATION**

Part II: Java Programming

(24 hours)

ITSE 1071

COURSE SYLLABUS

Course Description: Java II Programming is the second in a series of Java courses. The prerequisite for Java II is either the Java I course or a beginning Java course. Students must be familiar with Object Oriented Programming and terminology before taking Java II. The course covers creating applets and applications, the Graphics Class, coordinate systems, drawing Objects, threads, images and sound, the Abstract Windowing Toolkit, various components, interface layout, mouse and keyboard event handling, generic event handling, Windows, Frames, Dialog boxes and Menus. **Prerequisites:** Java Programming Part I or comparable knowledge and experience.

Objectives: Every student will be able to:

- Install Java on a PC or MAC
- Explain the difference between an application and an applet
- Explain how to use the applet tag in an HTML document
- Demonstrate how to work with color in an applet
- Explain what threads are and how they are used
- Use images and sound in an applet
- Recognize the AWT components
- Use layout managers in an applet
- Demonstrate how to handle mouse clicks and keyboard events
- Demonstrate how to implement event handlers
- Explain the use of panels in an interface

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. Webmasters increasingly will need to know how to implement real programs on Web pages and the Java programming language is a fundamental method of achieving this goal.

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

Course Outline:

- I. Introduction to Java Programming (6 hours)
 - A. Installing the JDK
 - B. Applets vs. Applications
 - C. The applet tag
 - D. Coordinate systems
 - E. Drawing shapes
 - F. Working with color, text and fonts

- II. Java Programming II (6 hours)
 - A. Using Java2D
 - B. Threads
 - C. Images and sound
 - D. User interfaces
 - E. The AWT components

- III. Java Programming III (6 hours)
 - A. Interface layout
 - B. Layout managers
 - C. Flow layout
 - D. Grid layout
 - E. Border layout
 - F. Basic event handling
 - G. Handling mouse clicks
 - H. Handling keyboard events

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- IV. Java Programming IV (6 hours)
- I. Event handlers
 - J. Checkbox events
 - K. Radio button events
 - L. Using panels for layout
 - M. Creating basic menus

Student Assessment Checklist:

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

- Install Java on a PC or MAC
- Demonstrate an understanding of the difference between an application and an applet
- Demonstrate an understanding of how to use the applet tag in an HTML document
- Demonstrate an understanding of how to work with color in an applet
- Demonstrate an understanding of threads and how they are used
- Use images and sound in an applet
- Recognize the AWT components
- Use layout managers in an applet
- Demonstrate an understanding of how to handle mouse clicks and keyboard events
- Demonstrate an understanding of how to implement event handlers
- Demonstrate an understanding of the use of panels in an interface