

# North Hennepin Community College

## CSCI 1130: Introduction to Programming in Java

### A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: \*.\*

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites:

MATH 1150 - College Algebra (Minimum grade: 1.67 GPA equivalent)

Corequisites: None

MnTC Goals: None

This course provides an introduction to object-oriented programming using the Java programming language. Topics include data types, operators, operands, expressions, conditional statements, repetition, arrays, methods, parameter passing, and returning values. The course will cover applets, graphics and events handling. Students will be also introduced to classes, objects, and inheritance. Prerequisite: Math 1150 or higher with a grade of "C" or better.

**B. COURSE EFFECTIVE DATES:** 08/27/1997 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. The Java language will be used to introduce foundations of object-oriented programming. Structured programming and modularization are taught using sequence, loops, decision statements, arrays, and methods. The course also focuses on event-driven programming.
2. Students will complete several programming assignments to develop their problem-solving skills and to gain experience in detecting and correcting software errors.
3. Topics covered include:
  - The Scope of Java
  - Java Applets
  - Introductory Graphics
  - Variables and Calculations
  - Methods and Parameters
  - Events
  - Decisions Structures
  - Repetition Structures
  - Objects and Classes
  - Graphical User Interfaces
  - Graphics and Sound
  - Program Style

#### **D. LEARNING OUTCOMES (General)**

1. Demonstrate problem solving skills using Java programming language (NHCC Core Ability Critical Thinking, comps. a, b, c; Program goal B).
2. Formulate the algorithm for solving the problems, and translate these algorithms into Java instructions (NHCC Core Ability Critical Thinking, comps. a, b, c; Program goal C).
3. Comprehend the basic concepts and methods of the programming life cycle. Program with thorough attention to details. (NHCC Core Ability Critical Thinking, comps. a, b, c, d; Program goal B).
4. Implement Java computer programs that are thoroughly documented and tested (generally of high quality and incorporating all principles of good design) (NHCC Core Ability Critical Thinking, comps. a, b, c, d; Program goal B).
5. Develop critical thinking skills through problem analysis, algorithm development, coding, and testing (NHCC Core Ability Critical Thinking, comps. a, b, c; Program goal B).

#### **E. Minnesota Transfer Curriculum Goal Area(s) and Competencies**

None

#### **F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

#### **G. SPECIAL INFORMATION**

1. Knowledge of Human Cultures and the Physical and Natural World --Through study in the sciences, mathematics, social sciences, humanities, histories, languages, the arts, technology and professions.
2. Intellectual and Practical Skills - Including: Inquiry and analysis; Critical and creative thinking; Written and oral communication; Quantitative literacy; Information literacy; Teamwork and problem solving.