

# North Hennepin Community College

## CSCI 1120: Programming in C/C++

### A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: \*.\*

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites:

This course requires either of these prerequisites

CSCI 1130 - Introduction to Programming in Java (CS0) (Minimum grade: 1.67 GPA Equivalent)

CSCI 1150 - Programming in C# for .NET (Minimum grade: 1.67 GPA Equivalent)

Corequisites: None

MnTC Goals: None

This course continues the study of the most popular computer languages. It covers the common procedural core of C and C++ languages: data types, expressions, operators, functions, pointers, and arrays. The course also includes elements of object-oriented programming: classes and objects.

Prerequisite: CSci 1130 or CSci 1150 with a grade of "C" or better

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

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Students will learn the common heritage of C++ with the ANSI C language (e.g. syntax, primitive types, iteration, conditional expressions, functions, arrays, pointers and dynamic memory allocation) as well as the object-oriented and unique aspects of programming with C++. Topics covered will include: Selection statements, repetition statements, functions, one and two-dimensional arrays, pointers, structures, file handling and classes.

### D. LEARNING OUTCOMES (General)

1. Develop an understanding of basic programming concepts. (Discipline Goal A; NHCC ELOs 1,2 Critical Thinking, comp. a)
2. Demonstrate knowledge of the structure and common language heritage of C and C++ and the additional features and enhancements that C++ has to offer over C programming language. (Discipline Goal C; NHCC ELOs 1,2 Critical Thinking, comps. a, c)
3. Develop and use basic programming concepts. (Discipline Goal B; NHCC ELOs 1,2 Critical Thinking, comps. a, b, c)
4. Analyze the features and functionalities of two-C and C++ languages from the point of view of implementing and maintaining programming solutions. (Discipline Goal C; NHCC ELOs 1,2 Critical Thinking, comps. a, b, c)
5. Assess competitive advantages of C++ for programmers in the global job market. (Discipline Goal A; NHCC ELOs 1,2 Critical Thinking, comps. a, b, c, d)
6. Develop critical thinking skills through problem analysis, algorithm development, coding, and testing. ((Discipline Goals C, D; NHCC ELOs 1,2 Critical Thinking, comps. a, b, c)

### 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.