

# **Application Programming Certificate**

The Application Programming Certificate helps students to build and develop an understanding for designing, coding, testing, and debugging applications in various programming languages.

# **Application Programming Curriculum**

#### Curriculum

#### **Program Courses**

Course Code	Title	Course Outlines	Goal Areas	Credits	
Program Courses - 12 credits					
CSCI 1120	Programming in C/C++ <b>or</b>	View-CSCI 1120	n/a	4	
CSCI 1130	Introduction to Programming in Java (CS0) <b>or</b>	View-CSCI 1130	n/a	4	
CSCI 1150	Programming in C# for .NET <b>or</b>	View-CSCI 1150	n/a	4	
CSCI 2001	Object Oriented Programming (CS1) <b>or</b>	View-CSCI 2001	n/a	4	
CSCI 2002	Data Structures and Algorithms (CS2) <b>or</b>	View-CSCI 2002	n/a	4	
CSCI 2020	Computer Architecture <b>or</b>	View-CSCI 2020	n/a	4	
CSCI 2060	Web Programming in ASP.NET	View-CSCI 2060	n/a	4	

## **NHCC Residency and GPA**

4 Credits must be earned at NHCC				
Total Credits Required	12			

## **Program Overview**

#### 2023-2024

The Application Programming Certificate helps students to build and develop an understanding for designing, coding, testing and debugging applications in various programming languages

#### **Program Outcomes**

Knowledge of Human Cultures and the Physical and Natural World, including:

Writing programs to handle a specific job, such as a program to track inventory within an organization.

Intellectual and Practical Skills, including:

- Revising existing software to improve performance.
- Customizing generic applications for specific tasks.
- Writing custom web applications.
- Differentiating requirements of application programming from system programming.

## **Program Maps**

Program roadmaps provide students with a guide to understand the recommended course sequence to complete their degree.

Application Programming Roadmap

# **Career Opportunities**

Information on careers, including salary and employment outlook data, is available at Minnesota State and the Bureau of Labor Statistics websites: **careerwise.minnstate.edu** and **www.bls.gov.** 

## **Transfer Information**

If you are planning on transferring to another institution, follow the guidelines available on our transfer resources web page to help you plan the process: **Transfer Information** 

## **Degree Information**

Certificates may be earned for successful completion of courses in a specialized program of study with a minimum grade point average of 2.00 (C). A certificate shall include 9 to 30 semester credits. At least one third of the total credits required for each certificate must be completed at North Hennepin Community College.

**Developmental Courses** Some students may need preparatory course(s) in Math and/or English. Courses numbered below 1000 will not apply toward a degree.

**Equal Opportunity Employer and Disability Access Information** North Hennepin Community College is a member of Minnesota State Colleges and Universities system and an equal opportunity employer and educator. This document is available in alternative formats to individuals with disabilities by calling 7634930555 or through the Minnesota Relay Service at 18006273529.

#### **Accreditation**

North Hennepin Community College is accredited by the Higher Learning Commission (hlcommission.org), an institutional accreditation agency recognized by the U.S. Department of Education.

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