

# Computer Programming

Certificate

Program Requirements..... 25

Additional Requirements..... 5

Total Credits ..... 30

## Program Information

The Computer Programming certificate program targets students interested in careers in information technology. It is designed for holders of an Associate of Arts (AA), Associate of Science (AS) and/or baccalaureate degree who have an interest in a career change or job enhancement. The program shares curriculum with related courses from business and computer networking to provide graduates with a diverse skill set. This certificate is currently being offered on a two-year, part-time basis.

## Program Goals

By completing this certificate, students will achieve the following learning goals:

1. Be fluent in two or more programming languages;
2. Write computer programs to solve any type of problem;
3. Understand ethical and moral issues as related to Computer Science applications;
4. Write Windows-based programs;
5. Write Graphical User Interface programs that are platform independent; and
6. Write Object-Oriented programs.

## Completion Requirements

- A minimum of 12 semester credits in courses numbered 1000 or above must be completed at ARCC.
- A minimum cumulative grade point average (GPA) of 2.0 in courses numbered 1000 or above at ARCC.
- A minimum grade of C must be earned in all program requirements.
- All program requirements must be completed at ARCC.
- Courses must be completed within three years. Students may petition to extend the window beyond the three years.
- All courses requirements must be complete before a certificate will be awarded.
- Students must complete a Certificate Application. Certificate Applications are available online, in the Office of Records & Registration, and in the Advising Center. Submit a completed form to the Office of Records & Registration.
- The requirements of this program are subject to change without notice.

## Program Requirements: 25 credits

- ☐ CSCI 1101 ♦ Introduction to Computer Science and Problem-Solving..... 3
- ☐ CSCI 1106 ♦ Fundamentals of Computer Science I ..... 4
- ☐ CSCI 1107 ♦ Fundamentals of Computer Science II..... 4
- ☐ CSCI 1115 Visual Basic Programming ..... 3
- ☐ CSCI 1125 ♦ Object-Oriented Programming Using Java..... 3
- ☐ CSCI 2100 ♦ Discrete Mathematics ..... 4  
(Cross-listed as MATH 2100)
- ☐ CSCI 2253 ♦ Assembly Language Programming ..... 4

## Additional Requirements: 5 credits

Select courses from the following to fulfill the 30-credit requirement:

- ☐ BUS 1119 Database Management Using Microsoft Access ..... 3
- ☐ BUS 1180 Developing Web Pages..... 3
- ☐ CNET 2101 Introduction to Networks (CCNA 1) ..... 3
- ☐ CSCI 1155 ♦ Introduction to Functional Language Programming ..... 1

For more information about our program graduation rates, the median debt of students who completed the program, and other important information, please visit the "Gainful Employment Disclosure Report" at: [http://www.minnstate.edu/admissions/ge/anokaramsey/GEDT\\_0152\\_3691\\_1/gedt.html](http://www.minnstate.edu/admissions/ge/anokaramsey/GEDT_0152_3691_1/gedt.html).

♦ Course has prerequisite - see course schedule or catalog description.

^ Course requires Instructor permission.

NOTE: You are encouraged to contact an academic advisor at 763-433-1230 for course planning assistance and information about transfer credit evaluation and transfer options.



A member of Minnesota State

AnokaRamsey.edu