2018-2019

Computer Science Transfer Pathway

Associate of Science (AS) Degree

Program Description

The Computer Science Transfer Pathway Associate of Science (AS) degree program offers students a powerful option: the opportunity to complete an Associate of Science degree with course credits that directly transfer to designated Computer Science bachelor's degree programs at Minnesota State universities. The curriculum has been specifically designed so that students completing this pathway degree and transferring to one of the seven Minnesota State universities enter the university with junior-year status. All courses in the Transfer Pathway associate degree will directly transfer and apply to the designated bachelor's degree programs in a related field.

Minnesota State Universities - Designated Degrees

- Bemidji State University: Computer Science BS
- Metropolitan State University: Computer Science BS
- Minnesota State University, Mankato
- Minnesota State University, Moorhead
- Southwest Minnesota State University: Computer Science BS
- St. Cloud State University: Computer Science BS
- Winona State University

Program Goals

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

1. Design and implement algorithms to solve problems in various application domains;
2. Design and write software solutions utilizing appropriate data structures incorporating object-oriented principles and best practices;
3. Be fluent in two or more programming languages;
4. Understand ethical and moral issues as related to software development;
5. Understand the computer's architecture as it relates to the design of software solutions; and
6. Have a strong educational base to become a life-long learner in the field of Computer Science.

Required Courses: 60 Total 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 2021♦ Machine Architecture and Organization 4
- ☐ CSCI 2100♦ Discrete Mathematics 4
  (*Cross-listed as MATH 2100*)

Choose at least 11 credits from the following electives:

- ☐ CNET 2101 Introduction to Networks (CCNA I) 3
- ☐ CSCI 1115 Visual Basic Programming 3
- ☐ CSCI 1125♦* Object-Oriented Programming Using Java 3
- ☐ CSCI 1155♦ Introduction to Functional Language Programming 1
- ☐ CSCI 2253♦ Assembly Language Programming 4
- ☐ ENGR 2218♦ Digital Logic 4
- ☐ MATH 1201♦ College Algebra II and Trigonometry 4
- ☐ MATH 1210♦ Pre-Calculus 5
- ☐ MATH 1401♦ Calculus II 5

**Transfer Note: Students intending to transfer should choose the following elective: CSCI 1125.*

Complete at least 30 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas. One course may satisfy more than one goal area, but the course credits may be counted only once.

- ☐ 1. Communication
  - ☐ ENGL 1120♦ ***OR*** ENGL 1121♦ 4
  - ☐ CMST 1110* ***OR*** CMST 2220 3
    **Students may take CMST 2215 in place of CMST 1110 (required by Minnesota State University, Mankato)*
- ☐ 2. Critical Thinking
- ☐ 3. Natural Science
- ☐ 4. Mathematical/Logical Reasoning
  - ☐ MATH 1400♦ 5
- ☐ 5. History/Social/Behavioral Sciences
- ☐ 6. Humanities/Fine Arts
- ☐ 7. Human Diversity *(at least one course required)*
- ☐ 8. Global Perspective *(at least one course required)*
- ☐ 9. Ethical/Civic Responsibility
- ☐ 10. People and the Environment

♦ ***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.

2018-2019

Computer Science Transfer Pathway

Associate of Science (AS) Degree

Pathway Plan

The following two-year Pathway Plan is suggested for full-time students. Part-time students will need more time to complete this pathway. For assistance with pathway planning, students should schedule an appointment with an academic advisor. See also the college catalog Appendix for course offering information.

Semester One (16-17 Credits)

- ☐ CSCI 1101♦ Introduction to Computer Science and Problem-Solving 3
- ☐ ENGL 1120♦ Cross-Current College Writing and Critical Reading
  OR
- ☐ ENGL 1121♦ College Writing and Critical Reading 4
- ☐ MATH 1400♦ Calculus I 5
- ☐ General Ed/MnTC 4-5

Semester Two (16-17 Credits)

- ☐ CMST 1110 Introduction to Communication
  OR
- ☐ CMST 2220 Interpersonal Communication 3
- ☐ CSCI 1106♦ Fundamentals of Computer Science I 4
- ☐ CSCI 2100♦ Discrete Mathematics 4
- ☐ General Ed/MnTC 5-6

Semester Three (15-16 Credits)

- ☐ CSCI 2021♦ Machine Architecture and Organization 4
- ☐ General Ed/MnTC 11-12

Semester Four (11-14 Credits)

- ☐ CSCI 1107♦ Fundamentals of Computer Science II 4
- ☐ CSCI 1125♦ Object-Oriented Programming Using Java 3
- ☐ General Ed/MnTC 4-7

Degree Specifics

- A minimum of 60 semester credits in courses numbered 1000 or above.
- A minimum cumulative grade point average (GPA) of 2.0 in courses numbered 1000 or above at ARCC.
- Some students may need preparatory courses in the areas of English, mathematics or reading. Courses numbered below 1000 will not apply toward this degree.
- Satisfy residency requirements.
- A minimum grade of C must be earned in all program requirements.
- All program requirements must be completed at ARCC.
- Courses within the 30 credit program must be completed within three years. Student may petition to extend the window beyond the three years.
- Completion of specific degree requirements.
- To receive your diploma, you must apply to graduate.
- The requirements of this program are subject to change without notice.

♦ ***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.

Anoka-Ramsey Community College
A member of Minnesota State
AnokaRamsey.edu