Computer Science

Associate in Science Degree 2012-2013

Program Requirements	19
Additional Requirements	11
General Education/MnTC	30
TOTAL CREDITS	**60**

Program Information:

This associate degree program targets a broad range of students interested in careers in Information Technology. It is intended that the degree articulate to the Computer Science program at Metropolitan State University and the Bachelor of Arts in InformationTechnology Management at Concordia University in St. Paul. The program shares curriculum with related courses from Business and Computer Networking to provide graduates with a diverse skill set. For more information on ARCC, visit our Web site at http://www.AnokaRamsey.edu.

Program Goals:

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

1. Write and implement algorithms using a programming language of their choice to solve any problem;
2. Write object-oriented programs;
3. Implement data structures in writing complex programs;
4. Be fluent in two or more programming languages;
5. Understand ethical and moral issues as related to Computer Science applications; Understand the computer's architecture as it relates to Computer Science, and,
6. Have a strong base to become a life-long learner in the field of Computer Science.

Developmental Courses:

Some students may need preparatory courses in the areas of English, mathematics, or typing/keyboarding. Courses numbered below 1000 will not apply toward this degree.

Completion 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 requirements must be completed within 3 years. Students may petition to extend the window beyond the 3 years.
- A minimum cumulative grade point average (GPA) of 2.0 in courses numbered 1000 or above at ARCC.
- Students who have transferred to ARCC must have a minimum GPA of 2.0 in combined ARCC courses and accepted transfer courses.
- A minimum of **20 semester credits** applied toward the degree must be taken from ARCC. This requirement may be reduced from **20 to 12 semester credits** for students transferring in at least **8 semester credits** from either another MnSCU college or the University of Minnesota.
- Completion of specific degree requirements. Total of 60 credits.

Transfer Note:

Students intending to transfer should choose the following electives: MATH 1201 and MATH 1400.

Program Requirements: 19 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 2253♦ Assembly Language Programming.....4
- ☐ MATH 2100♦ Discrete Mathematics.....4

Additional Requirements: .....11 credits

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

- ☐ CSCI 1115♦ Visual Basic Programming 3
- ☐ CSCI 1125♦ Object-Oriented Programming Using Java 3
- ☐ CSCI 1155♦ Intro to Functional Language Programming.....1
- ☐ CNET 2101 Data Telecommunications & Computer Networks 3
- ☐ ENGR 2218♦ Digital Logic 4
- ☐ MATH 1201♦ College Algebra II and Trigonometry 4
- ☐ MATH 1210♦ Pre-Calculus 5
- ☐ MATH 1400♦ Calculus I 5
- ☐ MATH 1401♦ Calculus II 5

General Education/MnTC Requirements: 30 credits

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 emphasis area, but the course credits may be counted only once. Students intending to transfer to a 4-year institution should complete all ten emphasis areas.

- ☐ 1. **Communication**
  - ☐ ENGL 1121♦ 4
  - ☐ CMST 1110* ***OR*** CMST 2220 3

    **Students may take CMST 2215 Public Speaking in place of CMST 1110 (required by MN State University-Mankato).*
- ☐ 2. **Critical Thinking**
- ☐ 3. **Natural Science**
- ☐ 4. **Mathematical/Logical Reasoning**
  - ☐ MATH 1200♦ 3
- ☐ 5. **History/Social/Behavioral Sciences**
- ☐ 6. **Humanities/Fine Arts**
- ☐ 7. **Human Diversity**
- ☐ 8. **Global Perspective**
- ☐ 9. **Ethical/Civic Responsibility**
- ☐ 10. **People and the Environment**

Program Sequence: The sequence that follows is suggested for full-time students. Part-time students will need more time to complete this program; many courses are offered in the evening.

	Fall Semester	Spring Semester
FIRST YEAR	CSCI 1101 .....4 MATH 1200.....4 ENGL 1121 .....4 General Ed or Electives ... 4-5 **TOTAL 16-17**	CSCI 1106 .....4 CMST 1110 or 2220 .....3 General Ed or Electives 9-10 **TOTAL 16-17**
SECOND YEAR	**Fall Semester**	**Spring Semester**
	CSCI 2253 .....4 Elective ..... 3-4 General Ed or Electives ..... 8 **TOTAL 15-16**	CSCI 1106 .....4 MATH 2100.....4 General Ed/Electives ..... 3-6 **TOTAL 11-14**

♦ ***Course has a prerequisite. Prerequisites are listed on the course schedule and in the ARCC Catalog Course Descriptions pages.***

NOTE: The requirements of this program are subject to change without notice. You are encouraged to contact an academic advisor, Cambridge Campus 763-433-1840 or Coon Rapids Campus 763-433-1240, for course planning assistance and information about transfer credit evaluation.

Anoka-Ramsey Community College
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