

# Computer Networking and Telecommunications

## Associate in Science Degree 2008-2009

Program Core Requirements	18
Additional Career Requirements	14
General Education/MnTC	30
Wellness	<u>2</u>
Total Credits	64

**Program Information:** This degree program prepares individuals for entry or advancement in the career field of computer network support and administration and also provides the first two years of a bachelor's degree related to information technology and network administration. Coursework will transfer in its entirety to the College of Continuing Education at the University of Minnesota and Minnesota State University-Moorhead and may transfer in part or entirety to other postsecondary institutions. Students should meet with a representative of the transfer institution when planning class schedules. For additional information about our Computer Networking Programs, visit our Web site at <http://www.AnokaRamsey.edu>.

**Program Goals:** By completing this program, students will achieve the following learning goals: 1) design and develop secure voice, video, and data networks; 2) implement and configure networked devices; 3) demonstrate the skills necessary to administer and monitor networks; 4) exhibit mastery of problem-solving skills to troubleshoot existing and emerging technologies; and, 5) function as responsible and ethical network administrators for organizations and society.

**Program Admission:** To apply for admission to one of the Computer Networking (CNET) Programs, submit the *Application for CNET Programs* to the Records and Registration Office. Applications are available in Counseling and Advising Services or the Records and Registration Offices on either campus.

**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 the AS degree.

Program Core Requirements	18 credits	General Education/MnTC Requirements	30 credits
CNET 2101 Data Telecommunications and Computer Networks	3	Complete at least 30 credits in courses from the Minnesota Transfer Curriculum, <u>including all courses listed</u> . You must complete at least one course in six of the ten emphasis areas. You may select courses that meet more than one emphasis area.	
CNET 1111 IT & Data Assurance I	3	1. Communication	
CNET 2112♦ Desktop Operating Systems	3	ENGL 1121♦ College Writing and Critical Reading	4
CNET 2113♦ Network Operating Systems	3	SPCH 1110 Introduction to Speech Communication or	
CNET 1112♦ IT & Data Assurance II	3	SPCH 2220 Interpersonal Communications	3
CNET 2301♦ Internet Protocol Routing	3	2. Critical Thinking	
<b>Additional Career Requirements</b>	<b>14 credits</b>	3. Natural Science	
BUS 1103 Human Relations in the Work Place	3	4. Mathematical/Logical Reasoning	
<b>Electives:</b> Select a minimum of 11 credits from the following:		MATH 1200♦ College Algebra	3
BUS 1108 Business Math (3 cr)		5. History/Social/Behavioral Sciences	
BUS 1113♦ Advanced Computer Applications (3 cr)		ECON 2205 Principles of Economics I	3
BUS 1122 Business Ethics and Social Issues (3 cr)		6. Humanities/Fine Arts	
BUS 1180♦ Developing Web Pages (3 cr)		7. Human Diversity	
BUS 2215 Legal Environment of Business (3 cr)		8. Global Perspective	
BUS 2244 Principles of Management (4 cr)		9. Ethical/Civic Responsibility	
CNET 1101 PC Troubleshooting, Maintenance & Repair (2 cr)		10. People and the Environment	
CNET 1201♦ A+ Core Hardware and OS Technologies (3 cr)		<b>Wellness</b>	<b>2 credits</b>
CNET 1202 Cisco Certified Design Associate (3)		Select any HPER course(s) totaling at least 2 credits.	
CNET 1202 Cisco Certified Design Associate (3 cr)		<b>Notes:</b> (1) A minimum cumulative grade point average (GPA) of 2.0 in courses numbered 1000 or above at ARCC. (2) A minimum grade of C must be earned in all Program Core requirements. (3) All Program Core requirements must be completed at ARCC. (4) A minimum of 64 semester credits numbered 1000 or above with a minimum of 20 semester credits taken at ARCC (reduced to 12 if 8 credits are transferred from another MnSCU institution or the U of M) is required for graduation. (5) Courses within the 32-credit program requirements must be completed within 3 years. Students may petition to extend the window beyond the 3 years.	
CNET 2105 Security Awareness and Policies (1 cr)		<b>Note:</b> Due to the dynamic nature of the computer networking industry, students are not able to sell back CNET course materials to the bookstore.	
CNET 2114 Unix Operating Systems (3 cr)			
CNET 2205 Fundamentals of Wireless LANs (3 cr)			
CNET 2211♦ Managing Network Security I (3 cr)			
CNET 2212♦ Managing Network Security II (3 cr)			
CNET 2297♦ Field Experience & Seminar (1-11 cr)			
CNET 2303♦ LAN Switching and Adv. Router Configs (3 cr)			
CNET 2304♦ WAN Theory and Design (3 cr)			
CNET 2401♦ Cisco Certified Network Associate (3 cr)			
CSCI 1101♦ Intro to Computer Science & Problem-Solving (3 cr)			
CSCI 1106♦ Fundamentals of Computer Science I (4 cr)			
CSCI 1107♦ Fundamentals of Computer Science II (4 cr)			
♦ Course has a prerequisite.			

**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.

<u>First Year</u>		<u>Second Year</u>	
Fall Semester	Spring Semester	Fall Semester	Spring Semester
CNET 2101	CNET 2301	CNET 1111	CNET 1112
CNET 2112	CNET 2113	CNET 2303	CNET 2304
General Ed or Electives	General Ed or Electives	BUS 1103	General Ed or Electives
<u>8-10</u>	<u>8-10</u>	3	<u>8-10</u>
Total	Total	General Ed or Electives	Total
14-16	14-16	<u>5-7</u>	14-16
		Total	
		14-16	

You are encouraged to contact a counselor or an advisor, Cambridge Campus 763.433.1840 or Coon Rapids Campus 763.433.1230, for course planning assistance and information about transfer credit evaluation. All program questions may be directed to the Director of the CNET Program at 763.433.1408.

**NOTE:** The requirements of this program are subject to change without notice.