COMPUTER SYSTEMS TECHNOLOGY

An Associate of Applied Science in Computer Systems Technology provides skills and education for qualified workers in the field of network and systems administration. The degree is designed to teach students both the business and IT-related concepts needed to enter the workforce as a systems administrator and technician. Four, full-time semesters are required to complete the degree program. An AAS in CST can be earned by completing a series of specific technical, business, and general education courses. Graduates with an AAS in Computer Systems Technology can be employed as systems administrators and in a wide variety of other positions in the information technology field. Graduates of this program will have a firm understanding of a wide variety of technical concepts, from the latest version of the Windows Operating System to routing and switching technology using Cisco equipment. Graduates will also have a wide body of knowledge in vendor neutral and theoretical concepts and practices.

The program objective is the development of a well trained workforce for the State of Alaska. Since many jobs in the computer technology sector are predicted to grow at high rates in the coming decade, this degree program was designed to train essential employees for that sector. Both the Matanuska-Susitna and Kodiak campuses offer the degree program.

The educational objectives of the Computer Systems Technology program are to produce graduates who:
1. Have sufficient technical competence to obtain employment as an entry-level technician and to be able to progress professionally within the discipline and are prepared for advanced study.
2. Are able to communicate their ideas.
3. Are able to work within a team environment.
4. Are able to apply their knowledge and skills to create and operate networked computer systems that provide solutions and add to the capabilities of business organizations.
5. Demonstrate their understanding of professional and ethical behavior in the workplace.

Students graduating from this program will demonstrate:
1. Proficiency in operating system, utility software and network installation and configuration.
2. Proficiency in computer hardware, software and network operation, trouble shooting and upgrades. Demonstrate familiarity with hardware, software and network security features.
3. Management of user accounts and group accounts in a MS Windows workgroup and/or domain.
4. Ability to identify, design, and implement a network services management strategy.
5. Setup, configuration, and management of a router to include: router interfacing, command line editing, startup, setup, and configuration.
6. Proficiency in the management of Local Area Networks (LANs).
7. Application of customer service principles, including relationships, perceptions, telephone techniques, quality, ethics, record keeping, interpersonal relationships, and teamwork.
8. Application of business principles and the fundamentals of investment, finance, organization, operation and management within a business entity.
9. Application of project management principles and practices, and use of appropriate project management software in the workplace.

OCCUPATIONAL ENDORSEMENT CERTIFICATE
Cisco Certified Network Associate (CCNA)

STUDENT LEARNING OUTCOMES
At the completion of this certificate program students are able to demonstrate:
1. Proficiency in Cisco router installation and configuration in multi-protocol internetworks using LAN and WAN switches.
2. Proficiency in Cisco switch and VLAN installation and configuration.
3. Entry-level tasks of planning, design, installation, operation and troubleshooting Ethernet and TCP/IP networks.

ADMISSION REQUIREMENTS
See Occupational Endorsement Certificate admissions in Chapter 6 of this catalog.

ADVISING
Students should consult an academic advisor for assistance with curriculum planning toward certifications.

ACADEMIC PROGRESS
Students must earn a satisfactory grade (C or higher) in all courses required for the certificate.

GENERAL UNIVERSITY REQUIREMENTS
See general university requirements for Occupational Endorsement Certificates at the beginning of this chapter.

MAJOR REQUIREMENTS
1. Complete the following required courses with a grade of C or better:
   - CNT A170  CCNA 1 Network Fundamentals (4)
   - CNT A261  CCNA 2 Router Fundamentals & Protocols (4)
   - CNT A270  CCNA 3 Switches & Wireless Routing (4)
   - CNT A271  CCNA 4 WAN Access (4)
2. A total of 16 credits is required for the Occupational Endorsement Certificate.

ASSOCIATE OF APPLIED SCIENCE
Computer Systems Technology

ADMISSION REQUIREMENTS
See Certificate and Associate Degree Programs Admission Requirements in the current MSC Catalog. Additionally, all students are required to take CIS A105 or possess equivalent knowledge prior to entering this degree program. Students registering for the Computer Systems Technology (CST) degree are required to take the recent Computer Skills Placement (CSP) test. Students with a score of 80% in the categories of Basic Concepts, File Management, Word Processing, Spreadsheet, and a score of 65 in the category of Information and Communication will be admitted into the CST program. Students with lower scores in any of these categories will need to take the required prerequisite course CIS 105, Introduction to PC and Application Software and pass with a grade of ‘B’ or better.

ACADEMIC PROGRESS
In order to receive an Associate Degree in Computer Systems Technology, students must achieve a grade of C or higher in all courses undertaken and applied to the degree.

GENERAL UNIVERSITY REQUIREMENTS
1. Complete the General University Requirements for Associate Degrees listed in the MSC Catalog.
2. Complete the Associate of Applied Science General Degree Requirements (including Oral Communications and ENGL A111) listed in the MSC Catalog.

AAS DEGREE REQUIREMENTS
Oral Communication Skills (3 credits):
   - COMM A111 Fundamentals of Oral Comm (3)
   - COMM A235 Small Group Communication (3)
   - COMM A237 Interpersonal Communication (3)
   - COMM A241 Public Speaking (3)
UNDERGRADUATE PROGRAMS

Written Communication Skills (6 credits):
ENGL A111 Methods of Written Comm. (3)
ENGL A212 Technical Writing (3) major requirement

General Requirements (6 credits):
Satisfied under Major Requirements.

MAJOR REQUIREMENTS
1. Complete the following required courses:
   BA A151 Introduction to Business (3)
   BA A231 Fundamentals of Supervision (3)
   CNT A160 PC Operating Systems (3)
   CNT A165 Customer Service Fundamentals (1)
   CNT A170 CCNA 1 Network Fundamentals (4)
   CNT A210 PC Technician Fundamentals (3)
   CNT A212 Network Technician Fundamentals (3)
   CNT A240 Windows System Essentials (2)
   CNT A241 Administering & Supporting Windows Workstations & Server (3)
   CNT A242 Windows Network Infrastructure Admin (3)
   CNT A243 Windows Directory Services Admin (3)
   CNT A244 Designing Secure Windows Networks (3)
   CNT A245 Windows Directory Services Design (2)
   CNT A246 Windows Network Infrastructure Design (2)
   CNT A261 CCNA 2 Router Fundamentals & Protocols (4)
   CNT A270 CCNA 3 Switching and Wireless (4)
   CNT A271 CCNA 4 WAN Access (4)
   CNT A276 Individual Technical Project (1-3)
   — or —
   CNT A282 Industry Workplace Experience (1-3)
   MATH A105* Intermediate Algebra (3)
   — or —
   MATH A107* College Algebra (4)
   — or —
   MATH A172* Applied Finite Math (3)
   * or any MATH course for which MATH A105, MATH A107, or MATH A172 is a prerequisite.

2. Students are required to meet a 2-credit Project Management requirement. See academic counselor for more information. CIOS A270 is recommended.

3. A total of 67-68 credits is required for the degree.

FACULTY
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