Student Learning Outcomes - upon completion, students will be able to:

1. Meet the requirements for this certificate level.
2. Complete the following.

CIS 4  Computer Literacy  4.5
CIS 66  Introduction to Data Communication and Networking  5
CIS 67A  Local Area Networks  4
CIS 108  Personal Computer Security Basics  4.5
CIS 170F  Windows Administration  4.5

Total Units Required ........................................ 22.5

Network Administration
Certificate of Achievement-Advanced

A.A. Degree
This Certificate of Achievement-Advanced and A.A. degree offers studies in overseeing and maintaining Windows systems as part of a network enterprise. Students become proficient in running administrative processes on a Windows operating system. Focus is placed on organization, security, and upkeep decisions as part of a larger business environment. It offers training in programming, network management, UNIX and Perl to aid in understanding more complex networking problems that occur in business enterprises.

Student Learning Outcomes - upon completion, students will be able to:

1. create algorithms to solve introductory-level problems using C programming and shell scripting or Perl languages.
2. identify networking components and protocols in the context of architectures and technologies for LAN, WAN and Internet networks.

Certificate of Achievement-Advanced
1. Meet the requirements for this certificate level.
2. Complete the following.

CIS 18A  Introduction to Unix/Linux  4.5
CIS 22A  Beginning Programming  4.5
    Methodologies in C++
CIS 22B  Intermediate Programming  4.5
    Methodologies in C++
or CIS 22BH  Intermediate Programming  4.5
    Methodologies in C++ - HONORS
CIS 66  Introduction to Data Communication and Networking  5
CIS 67A  Local Area Networks  4
CIS 67B  Introduction to Wide Area Networking  4
CIS 75A  Internet Concepts and TCP/IP Protocols  5

Network Administration
Certificate of Achievement

This Certificate of Achievement offers studies in overseeing and maintaining Windows systems as part of a network enterprise. Students become proficient in running administrative processes on a Windows operating system. Focus is placed on organization, security, and upkeep decisions as part of a larger business environment.

Student Learning Outcomes - upon completion, students will be able to:

1. develop and present a business improvement plan using the business decision making model and utilizing software applications in word processing, spreadsheets, or databases.
Complete one (1) course: 4.5
CIS 18B Advanced Unix/Linux (4.5)
CIS 33A Programming in Perl (4.5)

Complete one (1) course: 4.5-5
CIS 31 Operating System Concepts (5)
CIS 170F Windows Administration (4.5)

Total Units Required .......................... 40.5-41

A.A. Degree
Major Complete the Cert. of Achievement-
Advanced requirements 40.5-41
GE General Education (32-43 units)
Electives Elective courses required when major
units plus GE units total is less than 90
Total Units Required .................................. 90

Check with the CIS department about the recommended
sequence for completing the above courses.