

COMPUTER SCIENCE - NETWORK ADMINISTRATION & SECURITY

Associate in Applied Science, 72 Credit Hours, 18-Month Program

Diploma, 36 Credit Hours, 9-Month Program

The Network Administration & Security program strikes a balance between theory and application. Students will learn about real-life networking and security environments, making them immediately productive upon graduation and prepared to take on a variety of information technology (IT) roles. The first year builds a solid foundation of basic hands-on computer skills and networking concepts. The second year challenges students to learn to adapt and react to the changing world of computers. Deeper networking concepts are introduced, including security, administration of complex networks, and programming skills. The emphasis of coursework will be based on preparing students for CompTIA, Cisco CCNA, and Microsoft certification testing. Students also will be prepared to continue learning and advancing within the field, allowing them to work within an organization to apply networking to business strategy, tactics, and goals.

A typical job description for a network administrator would generally include working in an office environment. The job is often performed alone, and the network administrator must possess strong troubleshooting and technical skills, including strong math skills. Conversely, the network administrator must also work with users who are not comfortable with the system or who are experiencing difficulties, thus the requirement for strong communications skills. Configuring a network can require long hours of work in a short period of time. Maintaining the network can alternate between routine tasks to install, maintain, and update programs, as well as the hectic work of troubleshooting and fixing network problems. If a network crashes, the network administrator must work quickly and purposefully to solve problems and restore the network operation. In addition, the task of updating and maintaining network services can require late hours and work on an irregular schedule. The IT worker must also be prepared to maintain related technology within an organization, including audio-visual equipment, televisions, phones, and cabling infrastructure. Physical duties may include climbing and working using ladders, installing cabling, moving computers and related equipment, and installing equipment.

Course No.	Course Title	Credits
General Education Requirements		
CIS 105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ENGL 101	COMPOSITION*	3
ENGL 202	TECHNICAL COMMUNICATIONS	3
ECON 202	PRINCIPLES OF MACROECONOMICS	3
MATH 101	INTERMEDIATE ALGEBRA ^{1**} <i>or</i>	3
MATH 102	COLLEGE ALGEBRA ^{1***}	3
MATH 120	TRIGONOMETRY ^{1****}	3
PSYC 103	HUMAN RELATIONS IN THE WORKPLACE	3
	Total	21
Technical Requirements		
CIS 125	A+ HARDWARE/SOFTWARE	6
CIS 126	CISCO ACADEMY/NETWORKING TECHNOLOGIES I	3
CIS 127	CISCO ACADEMY/NETWORKING TECHNOLOGIES II	3
CIS 128	CISCO ACADEMY/NETWORKING TECHNOLOGIES III	3
CIS 129	WINDOWS OPERATING SYSTEMS	3
CIS 135	CISCO ACADEMY/NETWORKING TECHNOLOGIES IV	3
CIS 211	LINUX OPERATING SYSTEMS	3
CIS 213	NETWORKING USING WINDOWS SERVER	3
CIS 215	NETWORK DESIGN AND VIRTUALIZATION	3
CIS 216	INTRODUCTION TO PROGRAMMING	3
CIS 218	LINUX SERVER	3
CIS 220	NETWORK SECURITY I	3
CIS 225	DATABASES	3
CIS 230	COMPUTER FORENSICS	3
CIS 235	NETWORK SECURITY II	3
CIS 240	COMPUTER SCIENCE CAPSTONE	3
	Total	51

All remedial coursework must be completed in the first semester.

*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

**Prerequisite: Acceptable ACCUPLACER score or Elementary Algebra.

***Prerequisite: Acceptable ACCUPLACER score or Intermediate Algebra.

****Prerequisite: Acceptable ACCUPLACER score, Intermediate Algebra, or College Algebra.

¹Choose two of the three math classes (taken in 1st and 3rd semester)

Semester breakdown on next page

Semester Breakdown AAS

First Semester			Second Semester		
		CR			CR
CIS 125	A+ Hardware/Software	6	CIS 127	Cisco Academy/Networking Technologies II	3
CIS 126	Cisco Academy/Networking Technologies I	3	CIS 211	Linux Operating Systems	3
CIS 129	Windows Operating Systems	3	CIS 213	Networking Using Windows Server	3
CIS 105	Microcomputer Software Applications I	3	CIS 225	Databases	3
MATH 101	Intermediate Algebra <i>or</i>	3	ENGL 101	Composition	3
MATH 102	College Algebra		PSYC 103	Human Relations in the Workplace	3
Total Credit Hours		18	Total Credit Hours		18
Third Semester			Fourth Semester		
		CR			CR
CIS 128	Cisco Academy/Networking Technologies III	3	CIS 135	Cisco Academy/Networking Technologies IV	3
CIS 216	Introduction to Programming	3	CIS 215	Network Design & Virtualization	3
CIS 218	Linux Server	3	CIS 230	Computer Forensics	3
CIS 220	Network Security I	3	CIS 235	Network Security II	3
ECON 202	Principles of Macroeconomics	3	CIS 240	Computer Science Capstone	3
MATH 102	College Algebra <i>or</i>	3	ENGL 202	Technical Communications	3
MATH 120	Trigonometry				
Total Credit Hours		18	Total Credit Hours		18

Semester Breakdown Diploma

First Semester			Second Semester		
		CR			CR
CIS 125	A+ Hardware/Software	6	CIS 127	Cisco Academy/Networking Technologies II	3
CIS 126	Cisco Academy/Networking Technologies I	3	CIS 211	Linux Operating Systems	3
CIS 129	Windows Operating Systems	3	CIS 213	Networking Using Windows Server	3
CIS 105	Microcomputer Software Applications I	3	CIS 225	Databases	3
MATH 101	Intermediate Algebra <i>or</i>	3	ENGL 101	Composition	3
MATH 102	College Algebra		PSYC 103	Human Relations in the Workplace	3
Total Credit Hours		18	Total Credit Hours		18