

NETWORKING, SECURITY AND SYSTEM ADMINISTRATION - ENTERPRISE NETWORKING ASSOCIATE IN SCIENCE AND CERTIFICATE OF ACHIEVEMENT



See Business Office Technology for specific Microsoft applications (Word, Excel, PowerPoint, etc.).

Networking, Security and System Administration

These degree programs prepare students for careers in computer networking or system administration and related fields. Upon completion, students may find entry level positions as computer support technicians, junior network administrators, junior system administrators, hardware technicians, data/voice/video cabling technicians, network project managers, designers/estimators or technical support personnel. The major prepares students to work as team members in an information technology group which designs, evaluates, tests, installs and maintains corporate networks. Preparation for the following industry certifications: A+, Network+, Security+, Linux+, Microsoft Certified Technician (MCT) in Windows and Windows Server (active directory, network infrastructure and applications infrastructure), Linux Profession Institute Certification Level 2, Certified Wireless Network Administrator (CWNA), Cisco Certified Network Associate (CCNA), Certified Ethical Hacking (CEH).

Career Opportunities

Communications Specialist
Computer Game Programmer
Computer Hardware Specialist
Computer Help Desk Technician
Computer Maintenance Technician
Computer Software Technician
Computer Support Specialist
Computer Systems Analyst¹
Computing Analyst¹
Cyber Security Specialist
Database Manager¹
Information Specialist
Information Systems Programmer¹
LAN/WAN Manager
Manufacturer's Representative
Network Administrator
Network Analyst¹
Network Consultant
Network Control Technician
Network Training and Support Specialist
Programmer Analyst¹

Sales and Service
Scientific Programmer¹
Software Consultant
Software Developer¹
Systems Analyst¹
Systems Programmer¹
Technical Support Representative
Telecommunications Programmer¹
Telecommunications Technician
Telecommunications Technical Engineer¹
Training Specialist
Web Designer
Web Developer

¹ Bachelor Degree or higher required.

Similar Course List

The following Cuyamaca and Grossmont College courses are considered similar enough to be accepted in the major for local computer science degrees in the district. Modification of Major forms are not required.

Cuyamaca Course	Similar Grossmont Course
CIS-140	CSIS-180
CIS-190	CSIS-112
CIS-191	CSIS-113
CIS-211	CSIS-132
CIS-213	CSIS-133
CIS-215	CSIS-135
CS-119	CSIS-119
CS-181	CSIS-296
CS-182	CSIS-293
CS-281	CSIS-297
CS-282	CSIS-294

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Install, configure, upgrade, diagnose and troubleshoot a personal computer and its associated networking hardware and software in accordance with industry standards.

Associate in Science Degree Requirements

Code	Title	Units
Core Curriculum		
CIS-120	Computer Maintenance and A+ Certification	3
CIS-121	Network Cabling Systems	3
CIS-125	Network+ Certification	3
CS-119	Program Design and Development	3
CS-119L	Program Design and Development Lab	1
Area of Emphasis		
CIS-190 or CIS-191	Windows Operating System Linux Operating System	3
CIS-201	Cisco Academy - Introduction to Networking	3

CIS-202	Cisco Academy - Routing, Switching, and Wireless Essentials	3
CIS-203	Cisco Academy - Enterprise Networking, Security, and Automation	3
CIS-209 or CIS-263	Cisco CyberOps Fundamentals of Network Security	3
Select three of the following:		6.5-10
CIS-101	Fundamentals of Information Technology	
CIS-210	Cisco Networking Academy - Voice	
CIS-261	NSSA Degree Capstone	
CIS-264	Ethical Cybersecurity Hacking	
CIS-265	Computer Forensics Fundamentals	
CIS-271	Palo Alto Networks - Certified Network Security Administrator (PCNSA)	
CIS-272	Palo Alto Networks Firewall Configuration, Management, and Threat Prevention	
Total Units		34.5-38

Plus General Education Requirements (<https://catalog.gcccd.edu/cuyamaca/degree-requirements-transfer-information/>)

Certificate of Achievement

Students who complete only the courses required for the major including an area of emphasis qualify for a Certificate in Networking, Security and System Administration - Enterprise Networking. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.