

Computer and Networking Technologies

Associate of Applied Science in Information Technology: Network and Cyber Security

Associate of Applied Science Degree in Networking Technology: Cisco

Certificate of Completion in Information Technology: Network and Cyber Security

Certificate of Completion in Network and Cyber Fundamentals

Certificate of Completion in Networking Administration: Cisco

Certificate of Completion in Networking Technology: Cisco

Certificate of Completion - Microsoft Technical Specialist

Certificate of Completion in Linux Professional



**GATEWAY
COMMUNITY COLLEGE**

A MARICOPA COMMUNITY COLLEGE



Welcome to the Computer and Networking Technologies Program

Thank you for your interest in the CNT Program at GateWay Community College. Working in computer networking can be a very rewarding career using skills that we teach with a “hands on” emphasis.

Please review the enclosed information. If you decide to pursue a degree with us, complete all of the required steps in this packet.

You can access the following resources for answers to other questions about the program:

- Website: <https://www.gatewaycc.edu/cisco-networking>
- College Advising: Available in the Business Department located in the Administration/Faculty (AF) building.
- Wyatt Johnson – Program Director – wyatt.johnson@gatewaycc.edu

Please note that the curriculum, pre-requisites and related certifications are revised periodically. Although we do try to keep everything up to date, it is the applicant’s responsibility to remain aware of any changes that may occur.

Come and join us in pursuit of your career in Networking!

Regards,

Wyatt Johnson
Program Director
Computer and Networking Technologies Program
602-286-8587

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Registration Checklist

1	<p>To enroll to any of the colleges, you must first create a student account. You may download the Student Information Form here, complete the form and email it to enroll@gatewaycc.edu or go to my.maricopa.edu to complete the process online. Please fully complete the Student Information form because leaving missing data or blanks may impact your ability to find scholarships or other financial aid sources through <i>AcademicWorks</i> to help pay for college.</p> <ul style="list-style-type: none"> To create an account, go to the MEID Account Wizard, which is located within my.maricopa.edu. Follow the instructions for the MEID Account Wizard to create a user ID & password. Keep this information to login to your Student Center in the future. <p>NOTE: You will need to wait 20 minutes after creating an account before you can apply.</p>	Enrollment Services IE 1214	602.286.8200
2	Request Official Transcripts from all other educational agencies to be forwarded to the following address Gateway Community College Attn: Admissions and Records 108 North 40 Street Phoenix, AZ 85034	Enrollment Services IE 1214	602.286.8200
3	Take Course Placement Test (if applicable) Some courses and programs require test scores prior to enrollment. No fee required: BRING PICTURE ID and Call for times	Testing Center IE 1252	602.286.8160
4	Apply for Financial Aid and Scholarships, if interested http://www.gatewaycc.edu/Pay/FinancialAid/Apply.aspx http://www.fafsa.ed.gov/index.htm	Enrollment Services IE 1214	602.286.8300
5	Meet with the Computer Information Systems Program Advisor to explore your program options, obtain registration advisement and setup a program of study plan.	Enrollment Services IE 1201	602.286.8174
6	Register for Courses Schedule Available at www.gatewaycc.edu , Enroll online at www.my.maricopa.edu	Enrollment Services IE 1214	602.286.8200
7	Pay Tuition and Fees - Payment Plans and Payment Extensions Available. Ask for Details.	Enrollment Services IE 1214	602.286.8277
8	Obtain Student ID, Optional Student Life: BRING PICTURE ID	Enrollment Services IE 1214	602.286.8200
9	Obtain Parking Decal, Required if parking a vehicle on campus	Enrollment Services IE 1214	602.286.8200
10	Purchase books at the Bookstore or online	Main Building, Bookstore Room MA1200	602.286.8400

Program and Career Information

Career Description

GateWay Community College has been honored as a Cisco Regional Networking Academy since 2001. Our program is constantly working to provide you with the most hands-on environment available. Our students have the opportunity to rack, cable and configure Cisco routers and switches in our lab environment, learning how to build a network from the ground up.

Training is available in networking design, security and support. Work is found in areas with a focus on:

- Network design, installation and maintenance;
- Configuration, using techniques to increase available bandwidth, improve response times, and enhance reliability and quality of service;
- Configuration, using techniques to maximize performance and improve network security;
- Global intranet design and configuration.

How to Get Started

Sign up online or in person on campus.

Employment Outlook

For information about careers in your area of study, visit [O*NET OnLine](#) for detailed job descriptions, education requirements, wage and employment trend information.

Program Costs

Certificate of Completion in Network Technology: Cisco: \$2,332. Please note that this is only an estimate and does not include books. Estimates may change based on increases to tuition, course fees and book costs. Estimates are based on the 2016-2017 tuition rates for in-county students. Additional fees may apply.

Accreditation

Accreditation is a process used to measure and certify the credibility and quality of services offered by an organization.

GateWay is accredited by the [Higher Learning Commission](#) of the North Central Association of Colleges and Schools.

Current Books

The following books are the current texts required or recommended for all of the IT classes that are part of our degrees and certificates. Before purchasing a book for a class, double check with the instructor, just to make sure that nothing has changed, as newer versions of computer related textbooks are frequently published. The Maricopa “Find a Class” tool is also a good reference: <http://classes.sis.maricopa.edu/>

Class	Book	Required / Recommended
CNT140AA	none	
CNT150AA	CCNA Portable Command Guide, ISBN: 9781587204302	Recommended
CNT160AA	Same as CNT150AA	
CNT170AA	Same as CNT150AA	
CNT202	Currently Under Review	
CNT205	CCNA Security Port. Command Guide, 2nd Ed, ISBN: 1587205750	Recommended
BPC170	A+ Guide to IT Technical Support, 9 th Ed., ISBN: 1305266439	Required
BPC270	Same as BPC170	
CIS126DL	CompTIA Linux+LPIC-1/ Cert. 2nd Ed., ISBN: 9780071841689	Required
CIS238DL	Same as CIS126DL	
CIS105	Various options	Required
CIS270	Security+ Gde to Netwk Sec Fund 5th Ed., ISBN: 9781305093911	Required
CIS280	none	
CIS121AB	none	
MST150WT	Microsoft Specialist Guide to Msft. Win. 10, ISBN: 1285868579	Required
ITS240	Hands-on Ethical Hacking & Network Def., ISBN: 9781285454672	Required
CIS156	Introducing Python, ISBN: 9781449361181	Required

Guided Pathways

The next few pages have suggested course sequences for each program that we’ve put together to make it easier to plan out your classes. There is no requirement that the classes have to be taken following this schedule, but this plan takes most of the guesswork out of scheduling and should save you time. If your work schedule, etc. is an issue, then you are welcome to email me wjatt.johnson@gatewaycc.edu or schedule a chat with an advisor for help in planning classes.

Certificate of Completion in Networking Administration: Cisco

Description: The Certificate of Completion (CCL) in Networking Administration: Cisco provides training for those interested in working with Cisco Systems networking and Internet hardware. Knowledge and skills are developed to install, configure, maintain, and troubleshoot Cisco routers and switches, and configure advanced routing protocols, Local Area Networks (LANs), and Wide Area Networks (WANs). The courses in the program are designed to help prepare students for the Cisco Certified Networking Associate (CCNA) examination and are taught by Cisco Certified Professionals using the Cisco Networking Academy program curriculum.

Fall Semester

Course	Name	Credits	Notes
CNT140AA	Introduction to Networks	4	
CNT150AA	Cisco - Routing and Switching Essentials	4	

Spring Semester

Course	Name	Credits	Notes
CNT160AA	Scaling Networks	4	
CNT170AA	Cisco - Connecting Networks	4	

Certificate of Completion in Networking Technology: Cisco

Description: The Certificate of Completion (CCL) in Networking Technology: Cisco provides training for those interested in supervisory responsibilities working with Cisco Systems networking and Internet hardware. Knowledge and skills are developed to install, configure, maintain, and troubleshoot Cisco routers and switches; configure advanced routing protocols, Local Area Networks (LANs), and Wide Area Networks (WANs); troubleshoot problems with various hardware and software configurations and perform administrative tasks in a network. The courses in the program are also designed to help prepare students for the Cisco Certified Networking Associate (CCNA) examination and are taught by Cisco Certified Professionals using the Cisco Networking Academy program curriculum.

Fall Semester

Course	Name	Credits	Notes
CNT140AA	Introduction to Networks	4	
CNT150AA	Cisco - Routing and Switching Essentials	4	
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support	3	
BPC270	A+ Exam Prep: Operating System Configuration and Support	3	See * below

Spring Semester

Course	Name	Credits	Notes
CNT160AA	Scaling Networks	4	
CNT170AA	Cisco - Connecting Networks	4	

*(Highly Recommended for Comptia A+ Certification, but not required for Certificate)

Associate in Applied Science Degree in Networking Technology: Cisco

Description: The Associate in Applied Science (AAS) in Networking Technology: Cisco provides training for a supervisory position working with Cisco Systems networking and Internet hardware. Knowledge and skills are developed to install, configure, maintain, and troubleshoot Cisco routers and components, advanced routing protocols, Local Area Networks (LANs), and Wide Area Networks (WANs); troubleshoot problems with various common hardware and software configurations; perform administrative tasks in a network; develop methods for customer service. Courses in the program also prepare students for the Cisco Certified Networking Associate examination.

Fall Semester

Course	Name	Credits	Notes
CNT140AA	Introduction to Networks	4	
CNT150AA	Cisco - Routing and Switching Essentials	4	
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support	3	
BPC270	A+ Exam Prep: Operating System Configuration and Support	3	See * above

Spring Semester

Course	Name	Credits	Notes
CNT160AA	Scaling Networks	4	
CNT170AA	Cisco - Connecting Networks	4	
CIS126DL	Linux Operating System	3	
	Any approved communication class, such as COM230 (<i>recommended</i>)	3	

Continued on the next page...

Summer Semester

Course	Name	Credits	Notes
CIS270	Essentials of Network and Information Security	3	
CIS280	Current Topics In Computing	3	

Fall Semester

Course	Name	Credits	Notes
CIS105	Survey of Computer Information Systems	3	
ENG101	First-Year Composition	3	
	Any approved general education Math class	3	
	Any approved general education Humanities and Fine Arts class	3	

Spring Semester

Course	Name	Credits	Notes
CIS238DL	Linux System Administration	3	
ENG102 OR ENG111	First-Year Composition OR Technical and Professional Writing	3	
CRE101	Critical and Evaluative Reading I <u>OR</u> Equivalent as indicated by assessment	0-3	
	Any approved general education Social and Behavioral Sciences class, such as SOC180 (recommended)	3	
	Any approved general education Natural Sciences class	4	

Certificate of Completion in Information Technology: Network Security

Description: The Certificate of Completion (CCL) in Information Technology: Network Security program is designed to focus on the necessary skills required to secure a network including the security of various operating systems and network devices. Emphasis is placed on developing the theoretical and practical skills needed to maintain security on mission-critical networking and server systems. The program is designed to meet the training needs of government and industry employees. The program covers a variety of information security disciplines which include both vendor-neutral and vendor-specific information technology (IT) security training. The Information Technology: Network Security program also focuses on the skills needed for internationally recognized IT certifications and high demands in business, industry and government.

Fall Semester

Course	Name	Credits	Notes
CNT140AA	Introduction to Networks	4	
CNT150AA	Cisco - Routing and Switching Essentials	4	
CIS105	Survey of Computer Info. Systems	0-3	Or Permission of Program Director
MST150WT	Installing and Configuring Microsoft Windows 10	3	

Spring Semester

Course	Name	Credits	Notes
CNT160AA	Scaling Networks	4	
CNT170AA	Cisco - Connecting Networks	4	
CIS126DL	Linux Operating System	3	
CIS238DL	Linux System Administration	3	

Continued on the next page...

Summer Semester

Course	Name	Credits	Notes
CIS270	Essentials of Network and Information Security	3	*Equivalent to ITS110

Fall Semester

Course	Name	Credits	Notes
CNT205	Cisco Certified Network Associate Security	4	
CNT202	Cisco Secure Firewall Appliance Configuration	4	
ITS240	Ethical Hacking and Network Defense	3	
CIS156	Python Programming: Level 1	3	

Associate of Applied Science in Information Technology: Network and Cyber Security

Description: The Associate of Applied Science (AAS) in Information Technology: Network and Cyber Security program is designed to focus on the necessary skills required to secure a network including the security of various operating systems and network devices. Emphasis is placed on developing the theoretical and practical skills needed to maintain security on mission-critical networking and server systems. The program is designed to meet the training needs of government and industry employees. The program covers a variety of information security disciplines which include both vendor-neutral and vendor-specific information technology (IT) security training. The Information Technology: Network Security program also focuses on the skills needed for internationally recognized IT certifications and high demands in business, industry and government.

Fall Semester

Course	Name	Credits	Notes
CNT140AA	Introduction to Networks	4	
CNT150AA	Cisco - Routing and Switching Essentials	4	
ENG101	First-Year Composition	3	
MST150WT	Installing and Configuring Microsoft Windows 10	3	

Spring Semester

Course	Name	Credits	Notes
CNT160AA	Scaling Networks	4	
CNT170AA	Cisco - Connecting Networks	4	
CIS126DL	Linux Operating System	3	
	Any approved communication class, such as COM230 (<i>recommended</i>)	3	

Continued on the next page...

Summer Semester

Course	Name	Credits	Notes
CIS270	Essentials of Network and Information Security	3	*Equivalent to ITS110
	Any approved general education Social and Behavioral Sciences class, such as SOC180 (recommended)	3	

Fall Semester

Course	Name	Credits	Notes
CNT205	Cisco Certified Network Associate Security	4	
ITS240	Ethical Hacking and Network Defense	3	
CNT202	Cisco Secure Firewall Appliance Configuration	4	
CIS156	Python Programming: Level 1	3	
	Any approved general education Math class	3	

Spring Semester

Course	Name	Credits	Notes
CIS238DL	Linux System Administration	3	
	Any approved general education Humanities and Fine Arts class	3	
ENG102 OR ENG111	First-Year Composition OR Technical and Professional Writing	3	
CRE101	Critical and Evaluative Reading I <u>OR</u> Equivalent as indicated by assessment	0-3	
	Any approved general education Natural Sciences class	4	

Certificate of Completion - Microsoft Technical Specialist

Description: The Certificate of Completion (CCL) in Microsoft Technical Specialist program provides training for an entry-level position working with Windows networks. Knowledge and skills are developed to install, configure, customize, optimize, and troubleshoot Windows client workstations. The courses in the program also help to prepare for Microsoft Certified Product Specialist (MCP) and Microsoft Certified Information Technology Professional (MCITP) examinations. The curriculum ideally is taught by Microsoft Certified Professionals.

Fall Semester

Course	Name	Credits	Notes
CNT140AA	Introduction to Networks	4	
MST150WT	Installing and Configuring Microsoft Windows 10	3	
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support	3	
BPC270	A+ Exam Prep: Operating System Configuration and Support	3	

Spring Semester

Course	Name	Credits	Notes
CIS105	Survey of Computer Information Systems	3	
CIS121AB	Microsoft Command Line Operations	1	

Summer Semester

Course	Name	Credits	Notes
CIS270	Essentials of Network and Information Security	3	

Certificate of Completion in Linux Professional

Description: The Certificate of Completion (CCL) in Linux Professional program is designed to help to prepare students for a variety of industry-recognized Linux certification exams as well as provide practical hands-on skills for the work place. The program includes a core of Linux classes including Linux operating system basics, System Administration, Network Administration and Network Security. These classes will help develop a student’s knowledge and skill level in preparation for employment or to improve current professional skills. Objectives for a variety of industry certifications are encompassed within course and program objectives.

Fall Semester

Course	Name	Credits	Notes
CNT140AA	Introduction to Networks	4	Option A
CNT150AA	Cisco - Routing and Switching Essentials	4	Option A
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support	3	Option B
BPC270	A+ Exam Prep: Operating System Configuration and Support	3	Option B

(Students can take either CNT140AA and CNT150AA if they want to grow their networking knowledge OR BPC170 and BPC270 if they want more of a foundation in computer hardware and operating systems.)

Spring Semester

Course	Name	Credits	Notes
CIS126DL	Linux Operating System	3	
CIS238DL	Linux System Administration	3	

Certificate of Completion in Network and Cyber Fundamentals

Description: The Certificate of Completion (CCL) in Network and Cyber Fundamentals program is designed to focus on the necessary skills required to design and secure a network including the security of various systems and network devices. Emphasis is placed on developing the theoretical and practical skills needed to maintain security on mission-critical networking and server systems. The program is designed to meet the training needs of government and industry employees. The program covers a variety of essential security disciplines. The Network and Cyber Fundamentals program also focuses on the skills needed for internationally recognized IT certifications and high demands in business, industry and government. An Associate in Applied Science (AAS) is also available in this area.

Fall Semester

Course	Name	Credits	Notes
CNT140AA	Introduction to Networks	4	
CNT150AA	Cisco - Routing and Switching Essentials	4	
MST150WT	Installing and Configuring Microsoft Windows 10	3	

Spring Semester

Course	Name	Credits	Notes
CIS270	Essentials of Network and Info. Security	3	
CIS126DL	Linux Operating System	3	



Partners and Associations



Microsoft® IT Academy
Program Member

