

Computer Information Systems & Computer and Networking Technologies



**GATEWAY
COMMUNITY COLLEGE**

A MARICOPA COMMUNITY COLLEGE

V.5.4.5

Welcome to the CNT and CIS Programs

Thank you for your interest in an Information Technology program at GateWay Community College. Working in computer networking, security, tech support or programming 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/degrees-certificates/computer-and-information-technology>
- 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 Information Technology!

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

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.

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 wyatt.johnson@gatewaycc.edu or schedule a chat with an advisor for help in planning classes.

Planned CNT/CIS Class Offerings for Fall Semester

CIS113DE Microsoft Word: Word Processing 3

CIS102DA Customer User Support 3

CIS165DA Android Mobile Device Programming 3

CIS105 Survey of Computer Information Systems 3

CIS133DA Internet/Web Development Level I 3

CIS150AB Object-Oriented Programming Fundamentals 3

CIS156 Python Programming: Level I 3

CIS126DL Linux Operating System 3

CIS162AD C#: Level I 3

ITS110 Information Security Fundamentals 3

CIS270 Essentials of Network and Information Security 3

CIS290AA Computer Information Systems Internship 1

CIS290AB Computer Information Systems Internship 2

CIS290AC Computer Information Systems Internship 3

CNT140AB Introduction to Networks 4

CNT150AB Switching, Routing, and Wireless Essentials 4

ITS240 Ethical Hacking and Network Defense 3

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

ITS291 Computer Forensics Foundations 4

CIS165DB C#/VB.NET: Windows 8 App Development (3) OR

CIS165DC Xamarin/C# Cross Platform Development (3) 3

CIS197 VMware ESXI Server Enterprise 3

CIS119DO Introduction to Oracle: SQL 3

CIS217AM Advanced Microsoft Access: Database Management (3)

CIS276DB SQL Server Database 3

Planned CNT/CIS Class Offerings for Spring Semester

CIS105 Survey of Computer Information Systems 3

CIS117DM Microsoft Access: Database Management 3

CNT160AB Enterprise Networking, Security, and Automation 4

CNT205 Cisco Certified Network Associate Security 4

CLD110 Amazon Web Services Academy Cloud Foundations 2

CIS121AH Microsoft PowerShell/Command Line Operations 3

CIS111 Ethics in Information Technology 3

CIS265 Advanced iOS Application Development 3

CIS238DL Linux System Administration 3

CIS114DE Excel Spreadsheet 3

CIS262AD C# Level II 3

CIS224 Project Management 3 OR

CIS250 Management of Information Systems 3

CIS233DA Internet/Web Development Level II 3

ITS292 Advanced Computer Forensics 4

CIS166AA Introduction to JavaScripting 3

CIS225AB Object-Oriented Analysis and Design 3

CNT140AB Introduction to Networks 4

CNT150AB Switching, Routing, and Wireless Essentials 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

CIS126DL Linux Operating System 3

Degree Progress Checksheets

As you complete classes, track the progress towards your degree. This will make it much easier to plan out your classes and save you time when meeting with an advisor. These are the recommended courses to take for GWCC students.

AAS 3196 Associate in Applied Science in Information Technology

Description: The Associate in Applied Science (AAS) in Information Technology (IT) program is designed to provide students with skills to meet information technology needs across industries. This program includes instruction in the principles of computer hardware components and business software, programming, databases, networking, customer service, web development, and information systems and project management. Coursework helps prepare students for a variety of industry-recognized examinations and certifications.

Grade/Semester

Required Class Specializations

Select one of the following specializations within the IT AAS Degree program.

Specialization I: Cybersecurity Fundamentals 33-38

- _____ CIS105 Survey of Computer Information Systems 3
- _____ BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
MST150++ Any Microsoft Windows course (3) 3
- _____ CIS117DM Microsoft Access: Database Management (3) OR
CIS119DO Introduction to Oracle: SQL (3) OR
CIS276DB SQL Server Database (3) 3
- _____ CIS126DL Linux Operating System (3)
- _____ CIS133DA Internet/Web Development Level I 3
- _____ CIS156 Python Programming: Level I 3
- _____ CIS190 Introduction to Networks (3) OR
CNT140AB Introduction to Networks (4) 3-4
- _____ CIS224 Project Management (3) OR
CIS250 Management of Information Systems (3) 3

- _____ CIS111 Ethics in Information Technology (3)
- _____ CIS270 Essentials of Network and Information Security (3) OR
ITS110 Information Security Fundamentals (3) 3-6
- _____ ITS240 Ethical Hacking and Network Defense 3
- _____ Related Area Credits: 0-5 with BPC, CIS, CLD, CNT, ITS, MST prefix to 60 total

Specialization 2: Database Development 36-38

- _____ CIS105 Survey of Computer Information Systems 3
- _____ BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
MST150++ Any Microsoft Windows course (3) 3 OR
CIS126DL Linux Operating System (3)
- _____ CIS119DO Introduction to Oracle: SQL 3
- _____ CIS133DA Internet/Web Development Level I 3
- _____ CIS156 Python Programming: Level I (3) OR
CIS162++ Any C Programming: Level I course (3) OR
CIS163AA Java Programming: Level I (3) 3
- _____ CIS190 Introduction to Networks (3) OR
CNT140AB Introduction to Networks (4) 3-4
- _____ CIS224 Project management (3) OR
CIS250 Management of Information Systems (3) 3
- _____ CIS117DM Microsoft Access: Database Management 3
- _____ CIS150++ Programming Fundamentals 3
- _____ CIS164AB Oracle: PL/SQL Programming (3) OR
CIS276DA MySQL Database (3) OR
CIS276DB SQL Server Database (3) 3
- _____ CIS217AM Advanced Microsoft Access: Database Management (3) OR
CIS276DB SQL Server Database (3) 3
- _____ CIS225AB Object-Oriented Analysis and Design 3
- _____ Related Area Credits: 0-2 with BPC, CIS, CLD, CNT, ITS, MST prefix to 60 total

Specialization 3: Desktop Support 32-38

- _____ CIS105 Survey of Computer Information Systems 3
- _____ BPC270 A+ Exam Prep: Operating System Configuration and Support 3

_____ CIS117DM Microsoft Access: Database Management (3) OR
 _____ CIS119DO Introduction to Oracle: SQL (3) OR
 _____ CIS276DB SQL Server Database (3) 3

_____ CIS126DL Linux Operating System (3) OR

_____ CIS133DA Internet/Web Development Level I 3

_____ CIS150AB Object Oriented Programming Fundamentals (3) OR
 _____ CIS156 Python Programming: Level I (3) OR
 _____ CIS162++ Any C Programming: Level I course (3) OR
 _____ CIS163AA Java Programming: Level I (3) 3

_____ CIS190 Introduction to Networks (3) OR
 _____ CNT140AB Introduction to Networks (4) 3-4

_____ CIS224 Project management (3) OR
 _____ CIS250 Management of Information Systems (3) 3

_____ BPC170 A+ Exam Prep: Computer Hardware Configuration and Support 3

_____ CIS102DA Customer User Support 3

_____ Related Area Credits: 2-8 with BPC, CIS, CLD, CNT, ITS, MST prefix to 60 total

Specialization 4: Foundations of Mobile App Development 33-38

_____ CIS105 Survey of Computer Information Systems 3

_____ BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
 _____ CIS126DL Linux Operating System (3) OR
 _____ MST150++ Microsoft Windows (3) 3

_____ CIS117DM Microsoft Access: Database Management (3) OR
 _____ CIS119DO Introduction to Oracle: SQL (3) OR
 _____ CIS276DB SQL Server Database (3) 3

_____ CIS133DA Internet/Web Development Level I 3

_____ CIS162++ Any C Programming: Level I course 3

_____ CIS190 Introduction to Networks (3) OR
 _____ CNT140AB Introduction to Networks (4) 3-4

_____ CIS224 Project management (3) OR
 _____ CIS250 Management of Information Systems (3) 3

_____ CIS120DF Computer Graphics: Adobe Photoshop 3

_____ CIS165 Introduction to IOS Application Development I 3

_____ CIS165DA Android Mobile Device Programming 3

CIS165DB C#/VB.NET: Windows App Development (3) OR
 CIS165DC Xamarin/C# Cross Platform Development (3) 3

Related Area Credits: 0-5 with BPC, CIS, CLD, CNT, ITS, MST prefix to 60 total

Specialization 5: Microsoft Office Professional 32-38

CIS105 Survey of Computer Information Systems 3

CIS117DM Microsoft Access: Database Management (3)

CIS133DA Internet/Web Development Level I 3

CIS150AB Object Oriented Programming Fundamentals (3) OR
 CIS156 Python Programming: Level I (3) OR
 CIS162++ Any C Programming: Level I course (3) OR
 CIS163AA Java Programming: Level I (3) 3

CIS190 Introduction to Networks (3) OR
 CNT140AB Introduction to Networks (4) 3-4

MST150++ Microsoft Windows 3

BPC111AA Computer Keyboarding (1) OR
 Permission of Program Director (0) 0-1

CIS113DE Microsoft Word: Word Processing 3

CIS114DE Excel Spreadsheet 3

CIS118DB Desktop Presentation: PowerPoint 3

CIS224 Project Management Microsoft Project for Windows 3

Related Area Credits: 0-8 with BPC, CIS, CLD, CNT, ITS, MST prefix to 60 total

Specialization 7: Oracle Database Operations 32-38

CIS105 Survey of Computer Information Systems 3

BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
 CIS126DL Linux Operating System (3) OR
 MST150++ Microsoft Windows (3) 3

CIS119DO Introduction to Oracle: SQL 3

CIS133DA Internet/Web Development Level I 3

CIS150AB Object Oriented Programming Fundamentals (3) OR
 CIS156 Python Programming: Level I (3) OR
 CIS162++ Any C Programming: Level I course (3) OR
 CIS163AA Java Programming: Level I (3) 3

_____ CIS190 Introduction to Networks (3) OR
 _____ CNT140AB Introduction to Networks (4) 3-4

_____ CIS224 Project Management (3) OR
 _____ CIS250 Management of Information Systems (3) 3

_____ CIS119DP Oracle: Database Administration 3

_____ CIS154 Database Modeling and Design 3

_____ CIS164AB Oracle: Developer PL/SQL Programming 3

_____ Related Area Credits: 2-8 with BPC, CIS, CLD, CNT, ITS, MST prefix to 60 total

Specialization 8: Programming and Systems Analysis Level 1 32-38

_____ CIS105 Survey of Computer Information Systems 3

_____ CIS119DO Introduction to Oracle: SQL (3) OR
 _____ CIS276DB SQL Server Database (3) 3

_____ CIS126DL Linux Operating System (3) OR
 _____ MST150++ Microsoft Windows (3) 3

_____ CIS133DA Internet/Web Development Level I 3

_____ CIS150AB Object Oriented Programming Fundamentals 3

_____ CIS190 Introduction to Networks (3) OR
 _____ CNT140AB Introduction to Networks (4) 3-4

_____ CIS224 Project management (3) OR
 _____ CIS250 Management of Information Systems (3) 3

_____ CIS159 Visual Basic Programming I (3) OR
 _____ CIS162++ Any C Programming: Level I course (3) OR
 _____ CIS163AA Java Programming: Level I (3) OR
 _____ CIS165++ Any Mobile Application Development course (3) 3

_____ CIS166++ Any Web Scripting course 3

_____ GBS151 Introduction to Business 3

_____ Related Area Credits: 1-8 with BPC, CIS, CLD, CNT, ITS, MST prefix to 60 total

Specialization 10: Web Foundations 36-38

_____ CIS105 Survey of Computer Information Systems 3

_____ BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
 _____ CIS126DL Linux Operating System (3) OR
 _____ MST150++ Microsoft Windows (3) 3

_____ CIS117DM Microsoft Access: Database Management (3) OR
 _____ CIS119DO Introduction to Oracle: SQL (3) OR
 _____ CIS276DB SQL Server Database (3) 3

_____ CIS133DA Internet/Web Development Level I 3

_____ CIS150AB Object Oriented Programming Fundamentals (3) OR
 _____ CIS156 Python Programming: Level I (3) OR
 _____ CIS162++ Any C Programming: Level I course (3) OR
 _____ CIS163AA Java Programming: Level I (3) 3

_____ CIS190 Introduction to Networks (3) OR
 _____ CNT140AB Introduction to Networks (4) 3-4

_____ CIS224 Project management (3) OR
 _____ CIS250 Management of Information Systems (3) 3

_____ CIS120DF Adobe Photoshop Level I: Digital Imaging 3

_____ CIS136 Content Management Systems: WordPress 3

_____ CIS166AA Introduction to Javascript 3

_____ CIS233DA Internet/Web Development Level II 3

_____ CIS235 e-Commerce 3

_____ Related Area Credits: 0-2 with BPC, CIS, CLD, CNT, ITS, MST prefix to 60 total

Specialization 11: A related CCL and the following core courses with permission of the Program Director

_____ CIS105 Survey of Computer Information Systems 3

_____ CIS117DM Microsoft Access: Database Management (3) OR
 _____ CIS119DO Introduction to Oracle: SQL (3) OR
 _____ CIS276DB SQL Server Database (3) 3

_____ BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
 _____ CIS126DL Linux Operating System (3) OR
 _____ MST150++ Microsoft Windows (3) 3

_____ CIS150AB Object Oriented Programming Fundamentals (3) OR
 _____ CIS156 Python Programming: Level I (3) OR
 _____ CIS162++ Any C Programming: Level I course (3) OR
 _____ CIS163AA Java Programming: Level I (3) 3

_____ CIS190 Introduction to Networks (3) OR
 _____ CNT140AA Introduction to Networks (4) 3-4

_____ CIS133DA Internet/Web Development Level I 3

_____ CIS224 Project Management (3) OR
 _____ CIS250 Management of Information Systems (3) 3

General Education Credits 22-28

- _____ ENG101 First Year Composition 3
- _____ ENG102 First Year Composition 3 OR
ENG111 Technical and Professional Writing 3
- _____ COM100 Introduction to Human Communication 3 OR
COM110 Interpersonal Communication 3 OR
COM225 Public Speaking 3 OR
COM230 Small Group Communication 3
- COM225 is recommended for students transferring to Northern Arizona University.*
- _____ CRE101 College Critical Reading and Critical Thinking 3
- _____ MAT140 Intermediate Mathematics or higher level Mathematics course. 3-6
- _____ Any approved general education course(s) in Humanities, Arts and Design. 3
- _____ Any approved general education course(s) in Social-Behavioral Sciences. 3
- _____ Any approved general education course(s) from the Natural Sciences. 4

Restricted Elective Credits 0-5 (60 Total Credits for the AA Degree)

- _____ MST150WT Installing and Configuring Microsoft Windows 10 3
- _____ CIS121AB Microsoft Command Line Operations 1
- _____ CIS121AH Microsoft PowerShell/Command Line Operations 3
- _____ CIS270 Essentials of Network and Information Security 3
- _____ CIS111 Ethics in Information Technology 3
- _____ CIS156 Python Programming: Level I 3
- _____ CIS290AC Computer Information Systems Internship 3
- _____ CIS298AC Special Projects 3+

What would be some of the class I could take my first semester?

Consider options like: CIS105, BPC170/BPC270, CIS126DL, MST150WT, CNT140AB

AAS 3189 Associate in Applied Science in Network and Systems Administration

Description: The Associate in Applied Science (AAS) in Network and Systems Administration program provides students with a solid, hands-on skill set of computer, networking, and internetworking systems technology principles and desktop support. Students gain an understanding of the interaction between microcomputer software and hardware, network and internetworking operating systems software and hardware, local area network administration and management, the use of troubleshooting techniques, troubleshooting hardware and software tools, as well as interpersonal/customer service skills.

Grade/Semester

Required Class Credits 24-31

- _____ CIS105 Survey of Computer Information Systems (3)
- _____ BPC170 A+ Exam Prep: Computer Hardware Configuration and Support 3
- _____ BPC270 A+ Exam Prep: Operating System Configuration and Support 3
- _____ CIS102DA Customer User Support 3
- _____ CIS126DL Linux Operating System 3
- _____ CIS190 Introduction to Local Area Networks (3) OR
 CNT140AB Introduction to Networks (4) 3-4
(CNT140AB is required for students on the Cisco emphasis)

General Education Credits 22-28

- _____ ENG101 First Year Composition 3
- _____ ENG102 First Year Composition 3 OR
 ENG111 Technical and Professional Writing 3
- _____ COM100 Introduction to Human Communication 3 OR
 COM110 Interpersonal Communication 3 OR
 COM225 Public Speaking 3 OR
 COM230 Small Group Communication 3
COM225 is recommended for students transferring to Northern Arizona University.
- _____ CRE101 College Critical Reading and Critical Thinking 3
- _____ MAT140 Intermediate Mathematics or higher level Mathematics course. 3-6
- _____ Any approved general education course(s) in Humanities, Arts and Design. 3

_____ Any approved general education course(s) in Social-Behavioral Sciences. 3

_____ Any approved general education course(s) from the Natural Sciences. 4

Specialization Credits 12 (Choose ONE Specialization)

Emphasis I: Cisco System Administration (CCNA) and Security

_____ CNT150AB Switching, Routing, and Wireless Essentials 4

_____ CNT160AB Enterprise Networking, Security, and Automation 4

_____ CNT205 Cisco Certified Network Associate Security (4) 4

Emphasis III: Linux System Administration

_____ CIS238DL Linux System Administration (3)

_____ CIS239DL Linux Shell Scripting 3

_____ CIS240DL Linux Network Administration 3

_____ CIS275DL Linux Capstone 3

Restricted Elective Credits 0-5 (60 Total Credits for the AA Degree)

_____ MST150WT Installing and Configuring Microsoft Windows 10 3

_____ CIS121AB Microsoft Command Line Operations 1

_____ CIS121AH Microsoft PowerShell/Command Line Operations 3

_____ CIS270 Essentials of Network and Information Security 3

_____ CIS111 Ethics in Information Technology 3

_____ CIS156 Python Programming: Level I 3

_____ CIS250 Management of Information Systems 3

_____ CIS290AC Computer Information Systems Internship 3

_____ CIS298AC Special Projects 3+

What would be some of the class I could take my first semester?

Consider options like: CIS105, BPC170/BPC270, CIS126DL, MST150WT, CNT140AB

AAS 3197 Associate in Applied Science in Cybersecurity

Description: The Associate in Applied Science (AAS) in Cybersecurity is designed to focus on the necessary skills required to secure, protect and identify vulnerabilities in a network, including various operating systems and network devices. Emphasis is placed on developing the theoretical, legal, ethical 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 technologies and structured languages. The Cybersecurity program also focuses on the skills needed for internationally recognized IT certifications and high demands in business, industry, and government.

Grade/Semester

Required Class Credits 24-31

- _____ CIS105 Survey of Computer Information Systems (3)
- _____ BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
MST150++ Any Microsoft Windows course (3) 3
- _____ CIS111 Ethics in Information Technology (3)
- _____ CIS126DL Linux Operating System (3)
- _____ CIS156 Python Programming: Level I 3
- _____ CIS190 Introduction to Local Area Networks (3) OR
CNT140AB Introduction to Networks (4) 3-4
- _____ ITS110 Information Security Fundamentals 3 OR
CIS270 Essentials of Network and Information Security (3)
- _____ ITS240 Ethical Hacking and Network Defense 3

General Education Credits 22-28

- _____ ENG101 First Year Composition 3
- _____ ENG102 First Year Composition 3
- _____ COM100 Introduction to Human Communication 3 OR
COM110 Interpersonal Communication 3 OR
COM225 Public Speaking 3 OR
COM230 Small Group Communication 3

COM100 required for students intending to transfer to ASU West to earn a Bachelor of Science in Applied Computing (Cybersecurity).

- _____ CRE101 College Critical Reading and Critical Thinking 3
- _____ Any approved general education course in the Mathematics area. 3-6
- _____ Any approved general education course(s) in Humanities, Arts and Design. 3
- _____ Any approved general education course(s) in Social-Behavioral Sciences. 3
- _____ Any approved general education course(s) from the Natural Sciences. 4

Restricted Elective Credits 15-18 (Choose ONE Specialization)

Specialization I: Cyber Operations

- _____ BPC170 A+ Exam Prep: Computer Hardware Configuration and Support 3
- _____ CIS238DL Linux System Administration (3)
- _____ CIS290AC Computer Information Systems Internship (3) OR
CIS298AC Special Projects (3) 3
- _____ ITS291 Computer Forensics Foundations 4
- _____ ITS292 Advanced Computer Forensics 4

Specialization II: Linux System Administration

- _____ CIS238DL Linux System Administration (3)
- _____ CIS239DL Linux Shell Scripting 3
- _____ CIS240DL Linux Network Administration 3
- _____ CIS271DL Linux Security 3
- _____ CIS275DL Linux Capstone 3

Specialization IV: Cisco Network Administration and Security

- _____ CNT140AB CCNA-1 Introduction to Networks 4
- _____ CNT150AB CCNA-2 Switching, Routing, and Wireless Essentials 4
- _____ CNT160AB CCNA-3 Enterprise Networking, Security, and Automation 4
- _____ CNT205 Cisco Certified Network Associate Security 4

Specialization VI: Cyber Engineering

_____ CIS276++ Any SQL Database course 3

_____ CIS162++ Any C Programming: Level I course 3

(Students intending to transfer to U of A South should take CIS162 C Programming)

_____ CIS227 Assembler Language 3

_____ CIS238DL Linux System Administration 3

_____ CIS250 Management of Information Systems 3

_____ CIS262++ Any C Programming: Level II course 3

What would be some of the class I could take my first semester?

Consider options like: CIS105, BPC170/BPC270, CIS126DL, MST150WT, CNT140AB

AS 8601 Associate in Science, Emphasis in Computer Science

Description: The Associate in Science (AS), Emphasis in Computer Science degree provides the first two years of a four-year curriculum for students who wish to specialize in computer science. With an associate degree, students may seek employment as a computer user support specialist. With a bachelor's degree, students may pursue employment opportunities in several careers, including computer network architects, computer programmers, computer systems analysts, database administrators, information security analysts, network and computer systems administrators, and/or software developers in a number of sectors including arts, sciences, manufacturing, engineering, medicine, energy, and security.

Grade/Semester

Required Courses

- _____ CSC110AB Introduction to Computer Science (Java) (4)
- _____ CSC/EEE120 Digital Design Fundamentals (4)
- _____ CSC205AB Object Oriented Programming and Data Structures (4) OR
CSC205AC Object Oriented Programming and Data Structures (4) OR
CSC205AD Object Oriented Programming and Data Structures (4) 3-4
- _____ CSC/EEE230 Computer Organization and Assembly Language (4)
- _____ MAT227 Discrete Mathematical Structures 3
- _____ MAT230 Calculus with Analytic Geometry II (5)

Restricted Electives

Complete all courses in the transfer option that best aligns with your academic and professional goals. If your intended transfer institution is not listed, then select a combination of courses from the transfer options listed in order to meet the minimum credits required in the Restricted Electives section. Consult with an academic, faculty, or program advisor to prevent exceeding your university transfer program's maximum transferable credits (typically 64).

Subplan 1: Arizona State University: Computer Science, Bachelor of Science (any emphasis)

- _____ CSC240 Introduction to Different Programming Languages (3) OR
CSC240AA Introduction to Different Programming Languages (4) 3-4
- _____ ECE102 Engineering Analysis Tools and Techniques 2
- _____ ECE103 Engineering Problem Solving and Design 2
- _____ MAT240 Calculus with Analytic Geometry III (5) OR
MAT241 Calculus with Analytic Geometry III (4) 4-5

Subplan 2: Northern Arizona University: Computer Science, Bachelor of Science in Computer Science

- _____ MAT206 Elements of Statistics 3

Subplan 3: University of Arizona: Computer Science, Bachelor of Science

- _____ SPA+++ any SPA/Spanish course

Arizona General Education Curriculum (AGEC)

AGEC-S

_____ A single course with an [HU], [SB], or [L] designation may also be used to satisfy the Oral Communication, Critical Reading, or Awareness Area ([C], [G] and/or [H]) requirement(s).

_____ A single course with both the [HU] and [L] designations may be used to satisfy both of these areas.

_____ A single course with both the [SB] and [L] designations may be used to satisfy both of these areas.

First-Year Composition [FYC] Credits: 6

- _____ ENG101 First-Year Composition (3) OR
ENG107 First-Year Composition for ESL (3) AND
- _____ ENG102 First-Year Composition (3) OR
ENG108 First-Year Composition for ESL (3) 6

Literacy and Critical Inquiry [L] Credits: 0-3

Any approved general education course in the Literacy and Critical Inquiry [L] area.

_____ Recommend selecting a course that satisfies [L] and [SB] or [L] and [HU] or [L] and [COM] or [L] and CRE101 requirements simultaneously.

Mathematics [MA] Credits: 4-5

_____ MAT220 Calculus with Analytic Geometry I (5) OR
MAT221 Calculus with Analytic Geometry I (4) 4-5

Humanities, Arts and Design [HU] Credits: 6

_____ Any approved general education course in the Humanities, Arts and Design [HU] area.

Social-Behavioral Sciences [SB] Credits: 6

_____ Any approved general education courses in the Social-Behavioral Sciences [SB] area.

Natural Sciences [SG]/[SQ] Credits: 8

Students must complete eight (8-10) credits of General Chemistry, University Physics or General Biology for Majors.

_____ CHM151 General Chemistry I (3) AND

_____ CHM151LL General Chemistry I Laboratory (1) AND

_____ CHM152 General Chemistry II (3) AND

_____ CHM152LL General Chemistry II Laboratory

OR

_____ BIO181 General Biology (Majors) I (4) AND

_____ BIO182 General Biology (Majors) II (4) 8

Subject Options Credits: 0

Met by (CSC110 OR CSC110AA OR CSC110AB) AND (CSC205 OR CSC205AA OR CSC205AB OR CSC205AC OR CSC205AD) in Required Courses.

Awareness Areas Credits: 0-6

These requirements may be shared with Core Requirements.

Cultural Diversity in the US [C] Credits: 0-3

_____Any approved general education course in the Cultural Diversity in the U.S. [C] area.

Historical/Global Awareness [H]/[G] Credits: 0-3

_____Any approved general education course in the Historical [H] or Global awareness [G] area.

MCCCD Additional Requirements

MCCCD Additional Requirements Credits: 0-6

Courses in this area may also be applied to the AGECE Core Requirements. To minimize total credits required for degree and maximize transferable credits, it is recommended that courses be selected that meet more than one requirement wherever possible.

Oral Communication (COM) Credits: 0-3

_____COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 0-3

Critical Reading (CRE) Credits: 0-3

_____CRE101 College Critical Reading and Critical Thinking (3) OR

Equivalent as indicated by assessment (0) 0-3

General Electives

Select courses 100-level or higher to complete a minimum of 60 semester credits but no more than a total of 64 semester credits. Consult with an Academic Advisor.

Recommended for students intending to transfer to NAU to choose from the following list of courses. Each of these courses will partially fulfill the Mathematics or Natural Sciences elective requirements or the Technical electives requirement at NAU:

- _____ MAT240 Calculus with Analytic Geometry III (5)
- _____ MAT276 Modern Differential Equations (4) OR
- _____ BIO201 Human Anatomy and Physiology I 4
- _____ BIO202 Human Anatomy and Physiology II 4
- _____ BIO205 Microbiology 4
- _____ CHM235 General Organic Chemistry I (3) AND
- _____ CHM235LL General Organic Chemistry I Laboratory (1) 4

Recommended for students intending to transfer to ASU to select 4 to 5 credits from the following courses (except those courses used to fulfill the Natural Sciences requirements of the AGEC-S):

- _____ BIO181 General Biology (Majors) I 4
- _____ BIO182 General Biology (Majors) II 4
- _____ CHM151 General Chemistry I (4) AND
- _____ CHM151LL General Chemistry I Laboratory (1) 5
- _____ CHM152 General Chemistry II (3) AND
- _____ CHM152LL General Chemistry II Laboratory (1) 4
- _____ GLG101 Introduction to Geology I - Physical Lecture (3) AND
- _____ GLG103 Introduction to Geology I - Physical Lab (1) 4

What would be some of the class I could take my first semester?

Consider options like: CSC110AB, CSC120, ENG101, ENG102, appropriate MAT classes

CCL 5834N Information Technology: Android/iOS Programming

Description: The Certificate of Completion (CCL) in Android App Development prepares students for employment in entry-level coding, programming, and software development positions with an emphasis on Android mobile apps. This CCL will help prepare students to take the Associate Android Developer industry certification. Courses in this certificate can apply toward the Associate in Applied Science (AAS) in Mobile App Development and Certificate of Completion (CCL) in Mobile App Development, and Certificate of Completion (CCL) in Native Mobile App Development.

Grade/Semester

_____ CIS105 Survey of Computer Information Systems (3)

_____ CIS150 Programming Fundamentals (3) OR
 CIS150AB Object-Oriented Programming Fundamentals (3) OR
 CIS156 Python Programming: Level I (3) OR
 CIS159 Visual Basic Programming I (3) OR
 CIS162AD C# Level I (3) OR
 CIS163AA Java Programming: Level I (3) 3

CIS150 or CIS150AB recommended for students with no programming experience or who plan to complete the AAS 3099 or CCL 5193 in Mobile App Development.

_____ CIS165DA Introduction to Android Application Development 3

_____ CIS265DA Advanced Android Development 3

What would be some of the class I could take my first semester?

Consider options like: CIS105, CIS150AB, CIS165DA

CCL 5036 Certificate of Completion in Cisco Network Administration and Security

Description: The Certificate of Completion (CCL) in Cisco Network Administration and Security provides training for those interested in working with Cisco network and Internet hardware with an emphasis on securing networks from threats and vulnerabilities. Knowledge and skills are developed to install, configure, and maintain Cisco routers and switches; configure routing protocols, and Local Area Networks (LANs); troubleshoot problems with various hardware and software configurations; perform administrative tasks in a network. Specific skills in maintaining integrity, accountability, and confidentiality of data are also developed. Taught by Cisco Certified professionals using the Cisco Network Academy program curriculum, courses are designed to help prepare students for the Cisco Certified Network Associate (CCNA) and Security examinations.

Grade/Semester

- _____ CIS105 Survey of Computer Information Systems (3)
- _____ CNT140AB Introduction to Networks 4
- _____ CNT150AB Switching, Routing, and Wireless Essentials 4
- _____ CNT160AB Enterprise Networking, Security, and Automation 4
- _____ CNT202 Cisco Secure Firewall Appliance Configuration (4) OR
CNT205 Cisco Certified Network Associate Security (4) 4

What would be some of the class I could take my first semester?

Consider options like: CIS105, CNT140AB, CNT150AB

CCL 5039N Computer System Configuration and Support, Linux

Description: The Certificate of Completion (CCL) in Computer System Configuration and Support, Linux program is designed to prepare students for entry-level computer maintenance, help desk, and network technician jobs with an emphasis on Linux. The classes focus on the development of knowledge and skills in computer and network technologies including system components, installation, system configuration, peripheral devices, and notebooks. Emphasis is placed on the Linux Operating system including knowledge and skills required to install, configure and troubleshoot a Linux-based workstation. This program helps prepare students for the CompTIA A+ and Linux+ certification exams.

Grade/Semester

- _____ CIS105 Survey of Computer Information Systems (3)
- _____ BPC170 A+ Exam Prep: Computer Hardware Configuration and Support 3
- _____ BPC270 A+ Exam Prep: Operating System Configuration and Support 3
- _____ CIS126DL Linux Operating System (3)

What would be some of the class I could take my first semester?

Consider options like: CIS105, BPC170/BPC270, CIS126DL

CCL 5044N Computer System Configuration and Support, Network

Description: The Certificate of Completion (CCL) in Computer System Configuration and Support, Network program is designed to prepare students for entry-level computer maintenance, help desk, and network technician jobs with an emphasis on networking. The courses focus on the development of knowledge and skills in computer and network technologies including system components, installation, system configuration, peripheral devices, and notebooks. Emphasis is placed on elements of a data network, network components, and use of a network. This program helps prepare students for the CompTIA A+ and Network+ certification exams.

Grade/Semester

- _____ CIS105 Survey of Computer Information Systems (3)
- _____ BPC170 A+ Exam Prep: Computer Hardware Configuration and Support 3
- _____ BPC270 A+ Exam Prep: Operating System Configuration and Support 3
- _____ CIS190 Introduction to Local Area Networks (3) OR
CNT140AB Introduction to Networks (4) 3-4

What would be some of the class I could take my first semester?

Consider options like: CIS105, BPC170/BPC270, CNT140AB

CCL 5040N Computer System Configuration and Support, Security

Description: The Certificate of Completion (CCL) in Computer System Configuration and Support, Security program is designed to prepare students for entry-level computer maintenance, help desk, and network technician jobs with an emphasis on security. The courses focus on the development of knowledge and skills in computer and security technologies including system components, installation, system configuration, peripheral devices, and notebooks. Emphasis is placed on preventing, identifying, and mitigating threats to the security of information systems and utilizing the basic tools for information security. This program helps prepare participants for the CompTIA A+ and Security+ certification exams.

Grade/Semester

_____ CIS105 Survey of Computer Information Systems (3)
_____ BPC170 A+ Exam Prep: Computer Hardware Configuration and Support 3
_____ BPC270 A+ Exam Prep: Operating System Configuration and Support 3
_____ CIS126DL Linux Operating System (3)
_____ CIS270 Essentials of Network and Information Security (3)

What would be some of the class I could take my first semester?

Consider options like: CIS105, BPC170/BPC270, CIS126DL

CCL 5067 Certificate of Completion in Cross-Platform App Development

Description: The Certificate of Completion (CCL) in Cross-Platform App Development prepares students for employment in entry-level coding, programming, and software development positions with an emphasis on Windows Mobile apps and web apps. This CCL will help students prepare to take the Microsoft Technology Associate (MTA) Software Development Fundamentals C# certification. Courses in this certificate can apply toward the Associate in Applied Science (AAS) in Mobile App Development and Certificate of Completion (CCL) in Mobile App Development.

Grade/Semester

_____	CIS105 Survey of Computer Information Systems (3)
_____	CIS133DA Internet/Web Development Level I 3
_____	CIS162AD C#: Level I 3
_____	CIS165DB C#/VB.NET: Windows 8 App Development (3) OR CIS165DC Xamarin/C# Cross Platform Development (3) 3
_____	CIS166AA Introduction to JavaScripting 3
_____	CIS233DA Internet/Web Development Level II 3
_____	CIS262AD C# Level II 3

What would be some of the class I could take my first semester?

Consider options like: CIS105, CIS133DA, CIS162AD, CIS166AA

CCL 5165 Certificate of Completion in Cyber Operations

Description: The Certificate of Completion (CCL) in Cyber Operations program is designed to focus on the necessary skills required to secure, protect and identify vulnerabilities in a network, including various operating systems and network devices. Emphasis is placed on developing the theoretical, legal, ethical 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 technologies and structured languages. The Cyber Operations 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) in Cybersecurity is also available.

Grade/Semester

_____	CIS105 Survey of Computer Information Systems (3)
_____	BPC170 A+ Exam Prep: Computer Hardware Configuration and Support 3
_____	BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR MST150++ Any Microsoft Windows course (3) 3
_____	CIS111 Ethics in Information Technology (3)
_____	CIS126DL Linux Operating System (3)
_____	CIS238DL Linux System Administration (3)
_____	CIS156 Python Programming: Level I 3
_____	CIS190 Introduction to Local Area Networks (3) OR CNT140AB Introduction to Networks (4) 3-4
_____	ITS110 Information Security Fundamentals 3
_____	ITS240 Ethical Hacking and Network Defense 3
_____	CIS290AC Computer Information Systems Internship (3) OR CIS298AC Special Projects (3) 3
_____	ITS291 Computer Forensics Foundations 4
_____	ITS292 Advanced Computer Forensics 4

What would be some of the class I could take my first semester?

Consider options like: CIS105, BPC170/BPC270, CIS126DL, CIS111

CCL 5154 Certificate of Completion in Cybersecurity Fundamentals

Description: The Certificate of Completion (CCL) in Cybersecurity Fundamentals is designed to focus on the necessary skills required to secure, protect and identify vulnerabilities in a network, including various operating systems and network devices. Emphasis is placed on developing the theoretical, legal, ethical and practical skills needed to maintain security on mission-critical networking and server systems. The program is designed to provide applied skills necessary for government and industry employees. The program covers a variety of information security technologies and structured languages. The Cybersecurity program also focuses on the skills needed for internationally recognized IT certifications and high demands in business, industry, and government.

Grade/Semester

- _____ CIS105 Survey of Computer Information Systems 3
- _____ BPC270 A+ Exam Prep: Operating System Configuration and Support 3 OR
MST150++ Any Microsoft Windows course 3
- _____ CIS111 Ethics in Information Technology 3
- _____ CIS126DL Linux Operating System 3
- _____ CIS156 Python Programming: Level I 3
- _____ CIS190 Introduction to Local Area Networks 3 OR
CNT140AB Introduction to Networks 4
- _____ ITS110 Information Security Fundamentals 3 OR
CIS270 Essentials of Network and Information Security 3
- _____ ITS240 Ethical Hacking and Network Defense 3

What would be some of the class I could take my first semester?

Consider options like: CIS105, CIS126DL, MST150WT, CNT140AB, CIS111, CIS156

CCL 5908 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.

Grade/Semester

- _____ CNT140AA Introduction to Networks 4
- _____ CNT150AA Cisco-Routing and Switching Essentials 4
- _____ MST150++ Any Microsoft Windows course 3
- _____ CIS126DL Linux Operating System 3
- _____ CIS270 Essentials of Network and Information Security 3

What would be some of the class I could take my first semester?

Consider options like: CIS126DL, CNT140AB, CNT150AB, MST150WT

CCL 5043 Certificate of Completion in Desktop Support

Description: The Certificate of Completion (CCL) in Desktop Support program is designed to prepare students for entry-level computer maintenance, help desk, and network technician jobs. The classes focus on the development of knowledge and skills in computer, network, and security technologies, as well as the interpersonal skills in customer service/technical support needed to be successful within the industry. Depending on course selection, this program helps prepare students for the CompTIA A+, CompTIA Network+, and/or CompTIA Linux+ certification exams. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCLs) in a variety of specializations within the information technology field to deepen their knowledge and skills and help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

Grade/Semester

- _____ CIS105 Survey of Computer Information Systems 3
- _____ BPC170 A+ Exam Prep: Computer Hardware Configuration and Support 3
- _____ BPC270 A+ Exam Prep: Operating System Configuration and Support 3
- _____ CIS102DA Customer User Support 3
- _____ CIS126DL Linux Operating System 3
- _____ CIS190 Introduction to Local Area Networks (3) OR
 CNT140AB Introduction to Networks(4) 3-4
(Note: CNT140AB is recommended for students interested in Cisco networking)

What would be some of the class I could take my first semester?

Consider options like: CIS105, BPC170/BPC270, CIS126DL, CNT140AB

CCL 5914N Certificate of Completion in iOS Application Development

Description: The Certificate of Completion (CCL) in iOS Application Development prepares students for positions in app development for the Apple iPad, iPhone, and Apple Watch series. The program emphasizes knowledge and skills required to design, develop, test, and document structured and object-oriented programs utilizing Swift and Xcode. Courses in this certificate can apply toward the Associate of Applied Science (AAS) in Mobile App Development and Certificates of Completion (CCLs) in Native App Development and Mobile App Development.

Grade/Semester

_____ CIS105 Survey of Computer Information Systems 3

_____ CIS150AB Object-Oriented Programming Fundamentals 3

_____ CIS165 Introduction to iOS Application Development 3

_____ CIS265 Advanced iOS Application Development 3

What would be some of the class I could take my first semester?

Consider options like: CIS105, CIS150AB, CIS165

CCL 5046N Certificate of Completion in Linux Associate

Description: The Certificate of Completion (CCL) in Linux Associate program is designed to help prepare students for employment or to improve current professional skills. The program includes Linux operating system basics and management including sophisticated manipulation of file structures, backup systems, printing processes, troubleshooting, user account management, hard disk maintenance and configuration, process monitoring and prioritizing, kernel customization, and system resource control. This program helps prepare students for the Linux Professional Institute Certification (LPIC-1) and CompTIA Linux + certification exams.

Grade/Semester

_____ CIS105 Survey of Computer Information Systems 3

_____ CIS126DL Linux Operating System 3

_____ CIS238DL Linux System Administration 3

What would be some of the class I could take my first semester?

Consider options like: CIS105, CIS126DL

CCL 5052N Certificate of Completion in Linux Administration

Description: The Certificate of Completion (CCL) in Linux System Administration program is designed to help prepare students for a variety of industry-recognized Linux certification exams as well as provide practical hands-on skills for the workplace. The program includes a core of Linux classes including Linux operating system basics, system administration, network administration and network security. The courses in the program will help develop a student's knowledge and skill level in preparation for employment or to improve current professional skills. Students who complete this program may seek employment in a variety of environments. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

Grade/Semester

_____ CIS105 Survey of Computer Information Systems 3

_____ CIS126DL Linux Operating System 3

_____ CIS238DL Linux System Administration 3

_____ CIS239DL Linux Shell Scripting 3

_____ CIS240DL Linux Network Administration 3

_____ CIS275DL Linux Capstone 3

What would be some of the class I could take my first semester?

Consider options like: CIS105, CIS126DL

CCL 5030N Certificate of Completion in Microsoft Desktop Associate

Description: The Certificate of Completion (CCL) in Microsoft Desktop Associate program is designed to provide students with background knowledge and skills required for learning the specific tasks and industry recognized standards associated with how to effectively install and configure Windows operating systems. The course includes basic features of the Windows operating system, virtualization improvements, network connectivity, access to resources, monitor and maintain Windows clients and backup and recovery. It is designed to prepare students for the Microsoft 365 Certified: Modern Desktop Administrator Associate certification exam. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCL) in a variety of specializations within the information technology field to deepen their knowledge and skills and to help prepare them for multiple industry certification exams. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

Grade/Semester

_____ MST150WT Installing and Configuring Microsoft Windows 10 3

What would be some of the class I could take my first semester?

The only required class for this CCL is MST150WT

CCL 5063 Certificate of Completion in Native Mobile Application Development

Description: The Certificate of Completion (CCL) in Native Mobile Application Development prepares students for employment in entry-level coding, programming, and software development positions with an emphasis on native iOS and Android mobile apps. This CCL will help students prepare to take the App Developer with Swift Certification Level 1 and Associate Android Developer certifications. Courses in this certificate can apply toward the Associate in Applied Science (AAS) in Mobile App Development and Certificate of Completion (CCL) in Mobile App Development.

Grade/Semester

_____	CIS105 Survey of Computer Information Systems 3
_____	CIS150 Programming Fundamentals (3) OR CIS156 Python Python Programming: Level I (3) OR CIS159 Visual Basic Programming I (3) OR CIS162AD C# Level I (3) OR CIS163AA Java Programming: Level I (3) 3
_____	CIS150AB Object-Oriented Programming Fundamentals 3
_____	CIS165 Introduction to iOS Application Development I 3
_____	CIS165DA Android Mobile Device Programming 3
_____	CIS265 Advanced iOS Application Development 3
_____	CIS265DA Advanced Android Application Development 3

What would be some of the class I could take my first semester?

Consider options like: CIS105, CIS156, CIS150AB, CIS165

CCL 5969N Networking Administration: Cisco

Description: The Certificate of Completion (CCL) in Cisco Network Administration: CCNA provides training for those interested in working with network and Internet hardware. Knowledge and skills are developed to install, configure, and maintain Cisco routers and switches; configure advanced routing protocols, and Local Area Networks (LANs); troubleshoot hardware and software configurations; perform administrative tasks in a network. Taught by Cisco Certified professionals using the Cisco Networking Academy program curriculum, courses are designed to help prepare students for the Cisco Certified Network Associate (CCNA) examination. Students who complete this program may seek employment in a variety of environments. Additional Certificates of Completion (CCLs) in Cisco Network Administration and Security and Cisco Network Administration: CCNP, as well as an Associate in Applied Science (AAS) in Network and Systems Administration, are available.

Grade/Semester

_____ CIS105 Survey of Computer Information Systems 3

_____ CNT140AB Introduction to Networks 4

_____ CNT150AB Switching, Routing, and Wireless Essentials 4

_____ CNT160AB Enterprise Networking, Security, and Automation 4

What would be some of the class I could take my first semester?

Consider options like: CIS105, CNT140AB, CNT150AB

CCL 5035N VMware Foundations

Description: The Certificate of Completion (CCL) in VMware Foundations program is designed to help students prepare for VMware industry certifications and work in a variety of information technology environments including software defined data centers. The program introduces vSphere and VMware ESXi server in the enterprise and covers many aspects of virtualization for VMware ESXi server administration. It is designed to prepare students for the VMware Foundations (VCA) certification exam. Students can also pursue additional Certificates of Completion (CCLs) in a variety of specializations within the information technology field to deepen their knowledge and skills and to help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

Grade/Semester

- _____ CIS105 Survey of Computer Information Systems 3
- _____ BPC170 A+ Exam Prep: Computer Hardware Configuration & Support (3) AND
BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
MST150++ Any Windows Operation Course (3) 3-6
- _____ CIS126DL Linux Operating System (3)
- _____ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (3) 3
- _____ CIS197 VMware ESXi Server Enterprise 3

What would be some of the class I could take my first semester?

Consider options like: CIS105, BPC170/BPC270, CIS126DL, CNT140AB

CCL 5835N Web Application Development

Description: The Certificate of Completion (CCL) in Web App Development prepares students for employment in entry-level coding, programming, and software development positions with an emphasis on web apps. Courses in this certificate can apply toward the Associate in Applied Science (AAS) in Mobile App Development and Certificates of Completion (CCL) in Mobile App Development and Cross-Platform App Development.

Grade/Semester

_____ CIS105 Survey of Computer Information Systems 3

_____ CIS133DA Internet/Web Development Level I 3

_____ CIS166AA Introduction to JavaScripting 3

_____ CIS233DA Internet/Web Development Level II 3

What would be some of the class I could take my first semester?

Consider options like: CIS105, CIS133DA, CIS166AA

CCL 5833N Information Technology: Microsoft Programming

Description: The Certificate of Completion (CCL) in Windows App Development prepares students for employment in entry-level coding, programming, and software development positions with an emphasis on Windows platform and cross-platform apps. This CCL will help prepare students to take the MTA Software Development Fundamentals C# certification. Courses in this certificate can apply toward the Associate in Applied Science (AAS) in Mobile App Development and Certificates of Completion (CCLs) in Cross-Platform App Development and Mobile App Development.

Grade/Semester

- _____ CIS105 Survey of Computer Information Systems 3
- _____ CIS162AD C#: Level I 3
- _____ CIS165DB C#/VB.NET: Windows 8 App Development (3) OR
CIS165DC Xamarin/C# Cross Platform Development (3) 3
- _____ CIS262AD C# Level II 3

What would be some of the class I could take my first semester?

Consider options like: CIS105, CIS162AD

CCL 5137 Certificate of Completion in Microsoft Office Specialist

Description: The Certificate of Completion (CCL) in Microsoft Office Specialist emphasizes advanced training on word processing, spreadsheet, and database software for business purposes. This certificate builds upon the knowledge and skills gained by the CCL in Microsoft Office Professional for use in various business settings. This certificate helps prepare students for the Microsoft Office Specialist (MOS) certification examinations. This certificate embeds into the Associate in Applied Science (AAS) degree in Information Technology.

Grade/Semester

_____	BPC/OAS111AA Computer Keyboarding I (1) OR Permission of Program Director (0) 0-1
_____	CIS105 Survey of Computer Information Systems 3
_____	CIS113DE Microsoft Word: Word Processing 3
_____	CIS114DE Excel Spreadsheet 3
_____	CIS117DM Microsoft Access: Database Management 3
_____	CIS118DB Desktop Presentation: Powerpoint 3
_____	MST150++ Microsoft Windows (3) 2-3
_____	CIS224 Project Management Microsoft Project for Windows (3) 2-3
_____	CIS213DE Microsoft Word: Word Processing 3
_____	CIS214DE Advanced Excel Spreadsheet 3
_____	CIS217AM Microsoft Access: Database Management 3

What would be some of the class I could take my first semester?

Consider options like: CIS105, MST150WT, CIS113DE, CIS114DE

CCL 5132 Certificate of Completion in Microsoft Office Professional

Description: The Certificate of Completion (CCL) in Microsoft Office Professional emphasizes training on word processing, spreadsheet, database, and presentation software for business purposes. This certificate provides students with the knowledge and skills requisite of various business settings. This certificate helps with initial preparation for the Microsoft examinations for certification as a Microsoft Office Specialist (MOS). This certificate embeds into the Associate in Applied Science (AAS) degree in Information Technology and Certificate of Complete (CCL) in Microsoft Office Specialist.

Grade/Semester

- _____ BPC/OAS111AA Computer Keyboarding I (1) OR
Permission of Program Director (0) 0-1
- _____ CIS105 Survey of Computer Information Systems 3
- _____ CIS113DE Microsoft Word: Word Processing 3
- _____ CIS114DE Excel Spreadsheet 3
- _____ CIS117DM Microsoft Access: Database Management 3
- _____ CIS118DB Desktop Presentation: PowerPoint 3
- _____ MST150++ Microsoft Windows 3
- _____ CIS224 Project Management Microsoft Project for Windows 3

What would be some of the class I could take my first semester?

Consider options like: CIS105, MST150WT, CIS113DE, CIS114DE

CCL 5141N Amazon Web Services Practitioner

Description: The Certificate of Completion (CCL) in Amazon Web Services Practitioner builds the practical knowledge and skills of cloud computing. Cloud computing provides reliable, scalable, secure, and flexible technology solutions for personal and business use. This CCL will introduce students new to or interested in cloud computing to the fundamental concepts of cloud services as well as hands-on opportunities to apply these concepts to real-world applications. Students with the requisite experience in the field who complete this CCL can pursue employment in a variety of information technology jobs. This CCL also helps to prepare students for the AWS Cloud Practitioner certification, which is the first level of the AWS certifications.

Grade/Semester

_____ CLD110 Amazon Web Services Academy Cloud Foundations 2

What would be some of the class I could take my first semester?

The only class required for this CCL is CLD110

Partners and Associations



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