

Area of Study: **Business and Information Technology**  
 Pathway: **Cybersecurity and Information Assurance**  
 Degree type: **Associate in Applied Science**  
 Curriculum Code: **CIS.CIB.AAS (C207S)**

**(Total Program Credits: 60-62)**

The Cybersecurity and Information Assurance program provides a foundation in computing and network security and provides students with the skills necessary to obtain positions as cybersecurity analysts, specialists, engineers, and technical security support personnel. Coursework will prepare students for Cisco Certified Network Associate (CCNA) certification exams and offers courses required in the first two years of a bachelor degree. Students should note that four-year colleges and universities vary in specific course and transfer requirements. The student should consult the program coordinator, as well as the catalog and/or admissions advisor at the four-year college or university to which transfer is intended.

**PROGRAM LEARNING OUTCOMES:**

At the successful completion of the Associate in Applied Science Degree in Cybersecurity and Information Assurance program, the graduate will be able to:

- describe hardware and software components of client computers, servers and networks in order to identify their areas of vulnerability;
- write programs to develop computer logic and reasoning skills to be utilized in assessing computer security of applications and other types of software;
- design and implement secure networks that protects users and data from unauthorized access;
- identify, assess and remediate vulnerabilities to practice on-going network maintenance and monitoring;
- design and deploy layered defense mechanisms to protect a complex network;
- apply forensics techniques to computers and wired and wireless networks; and
- develop information assurance policies and practices to protect information within an organization.

**Placement Measures** MAT, RHT, and COL sequence placement will be determined by an Academic Advisor. Contact your Academic Advisor or Transfer Specialist (if transferring), before registering for courses.

*Developmental education courses do not transfer. They assist students in the path towards college credit.*

Program Map for Full-Time Students

Semester 1: Fall Semester	Category	Next Steps/Stackable Certs
CIS 101 Computer Systems & Business Applications (3) OR CIS 102 Professional Information Technology and Computer Science (3)	<i>Required Course</i>	Meet with your <a href="#">Academic Advisor</a> to create an academic plan.
CIS 105 A+ PC Hardware & Software (3)	<i>Required Course</i>	Explore transfer institutions and admissions requirements
CIS 177 Introduction to Linux (3)	<i>Required Course</i>	
CIS 210 Data Communications & Networking Fundamentals (3)	<i>Required Course</i>	

OR CIS 216 Introduction to Networks CCNA (3)		by attending <a href="#">transfer events (if intending to transfer)</a> .
RHT 101 (3) Freshman Rhetoric & Composition I (3)	<i>Communications</i>	

15 Credit Hours

**Note: Grade of “C” or higher is an IAI requirement for RHT 101 and RHT 102.**

<b>Semester 2: Spring Semester</b>	<b>Category</b>	<b>Next Steps</b>
CIS 125 Discrete Mathematics for Computing (4) OR MAT 110 College Algebra (5) OR MAT 111 Pre-Calculus (5) OR MAT 114 Plane Trigonometry (3)	<i>Mathematics</i>	Meet with your <a href="#">Academic Advisor</a> to update your academic (and transfer plan, if intending to transfer).  If intending to transfer, create a <a href="#">Transferology</a> account to explore how coursework transfers and attend a <a href="#">Transfer 101 Workshop</a> .
CIS 176 LAN Administration: Windows Server (3) OR CIS 179 Linux Administration (3)	<i>Required</i>	
CIS 212 Internetworking, Routing and Switching (3) OR CIS 217 Switching, Routing, Wireless Essentials CCNA (3)	<i>Required</i>	
CIS 277 Command Processing and Scripting (3)	<i>Required</i>	
RHT 102 Freshmen Rhetoric & Composition II (3) OR SPE 101 Principles of Effective Speaking (3)	<i>Communications</i>	

15-17 Credit Hours

*CIS 125, MAT 110, MAT 111, MAT 114: Meets the Mathematics and/or Science general education requirement.*

**NOTE: Grade of ‘C’ or high is an IAI requirement for RHT 101 and RHT 102.** Students must complete RHT 101, with SPE 101, or RHT 101 with RHT 102. Students intending to transfer are encouraged to complete all three courses: RHT 101 RHT 102 and SPE 101 to meet university requirements.

<b>Semester 3: Fall Semester</b>	<b>Category</b>	<b>Next Steps</b>
CIS 121 Introduction to Programming (3)	<i>Required</i>	Meet with your <a href="#">Academic Advisor</a> to update your academic (and transfer plan, if intending to transfer).
CIS 220 Introduction to Network Security (3)	<i>Required</i>	
<i>General Education: Humanities or Fine Arts (3)</i>	<i>Humanities or Fine Arts</i>	Attend a <a href="#">Ready to Apply Workshop</a> .
Program Elective (6)	<i>Program Elective</i>	

15 Credit Hours

<b>Semester 4: Spring Semester</b>	<b>Category</b>	<b>Next Steps</b>
CIS 226 Advanced Network Security (3)	<i>Required</i>	Meet with your

General Education: Social or Behavioral Science (3)	Social or Behavioral Science	<a href="#">Academic Advisor</a> to finalize your transfer plan and apply to your transfer institution(s) if intending to transfer.  Submit graduation petition by deadline (check for the specific date in catalog or syllabi.)
Program Electives (9)	Program Elective	

15 Credit Hours

<p><b>Program Electives (15)</b>  CIS 214 Scaling &amp; Connecting Networks (3)  CIS 218 Enterprising Networking, Security, Automation CCNA (3)  CIS 227 Vulnerability Analysis &amp; Ethical Hacking (3)  CIS 229 Information Assurance Ethics, Management and Policy (3)  CIS 231 Information Assurance Risk, Continuity and Governance (3)  CIS 236 Introduction to Wireless LAN Administration (3)  CIS 238 Introduction to Computer Forensics (3)  CIS 240 Advanced Computer Forensics (3)</p>
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Program Electives should be chosen with your advisor.

**Graduation requirements:**

Total semester hours required in *general education* toward the AAS Degree **15**

Total semester hours for program *required courses, program specific electives and other electives* toward the AAS Degree in Cybersecurity and Information Assurance **45**

Minimum total semester hours required for the AAS Degree **60**

**General Education requirements:**

- **Communications:** Two courses (six semester hours). Department choice of RHT 101 and RHT 102 or RHT 101 with SPE 101. If transferring, it is suggested to take all three courses.
- **Social and Behavioral Sciences or Humanities or Fine Arts:** Two courses (six semester hours) are required for graduation; department choice whether courses are taken from each discipline or two courses from same discipline, to include one approved [Human Diversity](#) course.
- **Mathematics or Physical or Life Science:** One course (three semester hours); review specific program requirements for your selected curriculum.

See [CIS course descriptions](#).

See *Humanities or Fine Arts and Social or Behavioral Sciences General Education requirements*.

**Coordinator:** Michael Henson, Ext. 3354