

Computer and Information Science, Associate of Science

Cyber and Information Security Technology concentration

Software Development concentration

Program Overview

The Associate of Science in Computer and Information Science (CIS) degree covers all aspects of the use of computers and information systems in today's organizations, including operating systems, software programs, networking, and security. There are two concentrations in the Associate of Science in Computer and Information Science degree: (1) Cyber and Information Security Technology and (2) Software Development. These employer-driven hands-on interactive educational programs equip students with cyber, networking and software development skills required for career-entry positions in a wide range of companies.

Program Outcomes

Students in the Associate of Science in Computer and Information Science program develop implementation and support skills in operating systems, networking, software programs, and cybersecurity. Students develop additional focused skills based on which concentration the student pursues. Students also learn principles of excellent customer service to assist clients with technical issues.

Upon successful completion of the Associate of Science in Computer and Information Science, graduates are able to:

- Use processes, tools, and technologies common to the profession
- Work as a member of a technical team
- Apply written, oral, and graphical communication in both technical and non-technical environments
- Identify and use appropriate technical literature
- Engage in continuous professional development through user groups, associations, conferences, readings, research, and other channels
- Use ethical best practices in the maintenance and security of information and systems

For additional information about the program link to <http://www.ecpi.edu/technology/?intcmp=technology-btn>. To see the Student Consumer Information link to: <https://www.ecpi.edu/student-consumer-services>, which provides additional information on the future careers, success, cost, and financing for this program. For information on the University Completion and Graduation Rates, please see Information [About ECPI University](#) on the ECPI website.

In 1.5 years, through our year-round schedule, you can earn an Associate of Science in Computer and Information Science or an Associate of Applied Science in Computer and Information Science (South Carolina only).

About Computer and Information Science

Graduates with a computer and information science degree have many career options. They often implement computer software systems including business applications. They may test software applications to ensure their correct implementation. Graduates also may assist network architects with design, implementation, and maintenance of computer networks, including wireless networks.

Some positions may require background checks, drug screening, and/or security clearances, depending on the position and industry. Student must have a general education background related to database programming including: Database Development, ASP.Net, SQL, C#, Object Oriented Design, MS Access, SQL Server, Oracle, Java, HTML, and Web Development. A student should also have examples of work, as well as other related skills to include MS Office, OS, and Certifications.

Some entry-level job titles for associate degree graduates include Help Desk Analyst, PC Technician, Technical Support Analyst, Hardware Technician, Systems Administrator, Network Administrator, Programmer Analyst, entry-level Database Programmer, entry-level Programmer Analyst, entry-level Application Developer, entry-level Web Programmer,

entry-level Mobile Programmer, Assistant Game Programmer, entry-level .Net Programmer. CIS graduates are required in many industries, so employment opportunities exist in military, business, medical, and government settings.

Recommended Certifications

Certifications are not required for completion of this program; however, ECPI encourages student to obtain all appropriate certifications to increase potential job opportunities. ECPI provides students in this program with vouchers which allow the student to take certification exams at a greatly reduced cost. Available certifications for this program include Microsoft, Cisco, and Oracle certifications, Linux+, A+, Network+, and Security+.

Program Outline

To receive the Associate of Science in Computer and Information Science or the Associate of Applied Science in Computer and Information Science (SC only), students must earn 70 semester credit hours. The program requires a minimum of 5 semesters, which is equivalent to 16 months or 65 weeks of instruction. The program requirements are as follows:

Program Requirements

Core Curriculum

21 semester credit hours

CIS123	Introduction to Python Scripting	3
CIS126	Introduction to Programming	3
CIS142	Introduction to Cloud Solutions	3
CIS150	Introduction to Networking	3
CIS206	Linux Administration	3
CIS212	Principles of Cybersecurity	3
	***ONE OF THESE TWO COURSES:	
BUS121	Introduction to Business	3
CIS290	Associate's Externship-CIS	3

*[CIS290](#), [CIS291](#), [CIS292](#), [CIS293](#), and [CIS294](#) do not transfer to the BS program.

**A combination of the following CIS externship courses may be substituted in lieu of [CIS290](#), provided that they total 3 credits: [CIS291](#), [CIS292](#), [CIS293](#), [CIS294](#).

Arts and Sciences*

15 semester credit hours

COM115	Principles of Communication	3
ENG110	College Composition	3
HUM205	Culture and Diversity: Exploring the Humanities	3
MTH131	College Algebra	3
PSY105	Introduction to Psychology	3

*For allowable substitutions of arts and sciences courses, see the Arts & Sciences Department page.

Self-Integration

9 semester credit hours

CIS106	Introduction to Operating Systems	3
CIS108	Office Applications	2
FOR110	Essentials for Success	3
COR191	Career Orientation	1

Cyber and Information Security Technology Concentration

Cyber and Information Security Technology Concentration Overview

Organizations have ever-increasing requirements to allow users to connect to various information systems both inside and outside the organization. Organizations are also challenged by increasingly sophisticated attempts to attack their data files. Computer networking defines the combination of hardware and skills required to provide secure access to data for individuals and organizations.

This employer-driven, hands-on, interactive educational program equips students with the networking and security skills required for career-entry positions in a wide range of organizations. Students are introduced to a variety of operating system environments, networking technologies, and associated security practices.

Cyber and Information Security Technology Concentration Outcomes

In addition to the Associate of Applied Science in Computer and Information Science program outcomes, students in the Cyber and Information Security Technology Concentration learn about installing, securing, testing and maintaining computer networks.

Upon successful completion of the Cyber and Information Security Technology concentration, graduates are able to:

- Configure and administer a network and security infrastructure
- Maintain, monitor, and troubleshoot a network and security infrastructure
- Implement technical and/or non-technical security controls to protect an organization from threats and vulnerabilities.

Required Courses

25 semester credit hours

CIS101	Computer Configuration I	3
CIS202	Introduction to Routing and Switching	3
CIS202L	Introduction to Routing and Switching LAB	1
CIS204	Intermediate Routing and Switching	3
CIS207L	Network Routing and Switching Lab	1
CIS225	Network Protocols and Services	3
CIS245	Windows Client and Server	3
CIS245L	Windows Client and Server LAB	1
CIS251	Advanced Windows Server	3
CIS256	Windows Active Directory	3
CIS256L	Windows Active Directory LAB	1

Software Development Concentration

Software Development Concentration Overview

Computer programs tell the computer what to do, which database information to identify and access, how to process it, and what equipment to use. Programs vary widely depending upon the type of information to be assessed or generated.

This hands-on, interactive educational program equips students with the computer programming and information processing skills required for career entry positions in a wide range of organizations. Students are introduced to a variety of operating system environments and programming languages.

Software Development Concentration Outcomes

- Develop software solutions from plans and designs
- Test and deploy software solutions
- Administer and maintain software solutions

Required Courses

25 semester credit hours

CIS121	Logic and Design	3
CIS126L	Introduction to Programming LAB	1
CIS213	Javascript	3
CIS223	Introduction to Databases	3
CIS224	Server-Side Scripting with PHP	3
CIS226	Introduction to Object Oriented Programming	3
CIS250	Structured Query Language	3
CIS282	Web Interface Design	3
	***ONE OF THESE TWO COURSES:	
CIS214	Object-Oriented Programming Using C#	3
CIS218	Object-Oriented Programming Using JAVA	3