

COMPUTER INFORMATION SYSTEMS

Cybersecurity Associate of Applied Science

PROGRAM DESCRIPTION

The Computer Information Systems: Cybersecurity program is a two-year sequence of classes designed to prepare the student, via hands-on training, for employment in the computer area as an entry-level network administrator, computer support person, web designer, or computer programmer, while developing general problem-solving and troubleshooting skills that can be applied to networking, server, computer, web, and business programming environments. Further, this degree adds hands-on cybersecurity training in ethical hacking, computer hardware, computer forensics, cloud services, virtualization, switches, routers, and Adaptive Security Appliance (ASA) devices. At UCC, students will learn to program in a high-level programming language and to apply programming concepts in a variety of environments. Students will become proficient as a user and manager of server and desktop operating systems, switches, routers and ASAs. Students will also learn how to configure and modify the hardware components of server and desktop systems. In addition, the CIS program provides a strong foundation in basic business and project management principles and practices. Finally, the program develops verbal and written communication skills.

PROGRAM OUTCOMES

Students who successfully complete the Associate of Applied Science in Cybersecurity will:

1. Become proficient in a variety of modern internet and business-oriented computer skills
2. Develop software and hardware problem-solving skills using programming logic and hands-on lab situations
3. Learn to efficiently use common office applications, receive practical experience with a variety of operating systems, and work with typical hardware configurations
4. Demonstrate proficiency in information technology related to computer programming; device initiation, configuration, and management, project management, and webpage design
5. Employ common cybersecurity practices to eliminate or mitigate threats that originate

CAREER CONSIDERATIONS

The Computer Information Systems: Cybersecurity program is a two-year sequence of classes designed to prepare the student, via hands-on training, for employment in the computer area as an entry-level network administrator, computer support person, web designer, or computer programmer, while developing general problem-solving and troubleshooting skills that can be applied to networking, server, computer, web, and business programming environments. Further, this degree adds hands-on cybersecurity training in ethical hacking, computer hardware, computer forensics, cloud services, virtualization, switches, routers, and Adaptive Security Appliance (ASA) devices. At UCC, students will learn to program in a high-level programming language and to apply programming concepts in a variety of environments.

Students will become proficient as a user and manager of server and desktop operating systems, switches, routers and ASAs. Students will also learn how to configure and modify the hardware components of server and desktop systems. In addition, the CIS program provides a strong foundation in basic business and project management principles and practices. Finally, the program develops verbal and written communication skills.

PROGRAM COURSE REQUIREMENTS

Year One

CIS 111	Computer Systems Configuration	4
CIS 120	Introduction to Computer Information Systems	4
CIS 122	Orientation to Programming	4
CIS 133	Introduction to Programming I	4
CIS 140M	Introduction to Microsoft Operating Systems	4
or CIS 140L	Introduction to Linux Operating System	4
CIS 151C	Networking Essentials	4
CIS 233	Introduction to Programming II	4
CIS 240M	Installing & Configuring Microsoft Windows Server	4
CIS 275	Introduction to Database Management Systems I	4
CIS 279M	Microsoft Windows Server Administration I	4
MTH 095	Intermediate Algebra (or higher)	4
PSY 101	Psychology of Human Relations	3
WR 121	Academic Composition*	4

Year One Credits 51

Year Two

CIS 125S	Computer Applications – Spreadsheets	3
CIS 145	Computer Forensics for Ethical Hackers	4
CIS 152C	Switching and Routers	4
CIS 195	Authoring for the World Wide Web I	4
CIS 245	Project Management	4
CIS 276	Introduction to Data Management Systems II	4
CIS 280	Cooperative Work Experience: CIS	2
CIS 284	Network Security Fundamentals	4
CIS 285A	Ethical Hacking	4
CIS 285B	Advanced Network Device Security (CCNA Security)	4
CIS 285C	Cloud Services Technologies	3
CIS 286A	Virtualization Technologies	3
CIS 288M	Microsoft Windows Server Administration II	4
CIS 295	Authoring for the World Wide Web II	4
SP 111	Fundamentals of Public Speaking	4

Year Two Credits 55

* A grade of C or better must be attained in the courses indicated.