

**Program Number 10-151-2
Associate Degree in Applied Science • Four Terms**

ABOUT THE PROGRAM

Cybersecurity Specialists implement, maintain, and audit the security of an organization's computer networks and systems. Learn to protect data confidentiality, integrity and availability using current real-world technology, processes, and procedures. Emphasis is placed on vigilant security awareness, threat detection and implementing appropriate incident responses.

PROGRAM OUTCOMES

- Identify security strategies.
- Implement secure infrastructures.
- Conduct security testing.
- Analyze security data.
- Mitigate risk.
- Develop security documentation.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

Lakeshore credits transfer to over 30 universities. For more information visit lakeshore.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Complete Get Started at Lakeshore appointment:
 - Application Check-in
 - College Orientation Overview
 - 1st Time Program Registration

**Submit high school transcripts, college transcripts, and test scores (optional, highly recommended). Official transcripts will be needed for transferring college credit(s) and for financial aid purposes.*

ACADEMIC PREPAREDNESS/FUTURE SEMESTER ENROLLMENT STEPS

If applicable, complete program-specific academic preparedness requirements and enrollment steps prior to enrolling in occupational or core courses. Students will be notified if there is a program waitlist. View the college's program webpage for details: <https://lakeshore.edu/programs-and-courses/career-areas/information-technology-it-it-cybersecurity-specialist>.

APPROXIMATE COSTS

\$152.85 per credit tuition (WI resident) plus \$9.17 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit lakeshore.edu/Financial-Aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit lakeshore.edu/Financial-Aid for more information.

CONTACT

Lakeshore College Recruiter
920.693.1366 • Recruitment@lakeshore.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10154122	PC Support*	3
10150114	Networking 1*	3
10154124	Information Security Principles*	3
10801136	English Composition 1	3
10804133	Math & Logic	3
		15
Term 2		
10150173	Server Administration 1*	3
10150176	Networking 2*	3
10150131	Linux*	3
10801198	Speech OR 10801196 Oral/Interpersonal Communication	3
10809196	Introduction to Sociology OR 10809122 Introduction to American Government OR 10809166 Introduction to Ethics	3
		15
Term 3		
10150163	Networking 3*	3
10150130	Virtualization*	3
10151104	Intrusion Detection*	3
10151137	Incident Response*	3
10809198	Introduction to Psychology	3
		15
Term 4		
10150165	Networking 4*	3
10150179	Network Security*	3
10151164	Penetration Testing*	3
10151133	Network Forensics and Threat Hunting*	3
10151102	Cybersecurity Capstone*	3
		15
		TOTAL 60

*CBE delivery only

Curriculum and program acceptance requirements are subject to change. Program start dates vary; check with your academic counselor for details. The tuition and fees are approximate based on 2025-2026 rates and are subject to change prior to the start of the academic year.

CYBERSECURITY CAPSTONE...enhances the student's ability operate in the cybersecurity field. Participants will collect and correlate digital forensics information, and showcase their cybersecurity knowledge in this independent, self-paced, project-based capstone course. PREREQUISITE: 10150176 Networking 2

ENGLISH COMPOSITION 1...is designed for learners to develop knowledge and skills in all aspects of the writing process. Planning, organizing, writing, editing and revising are applied through a variety of activities. Students will analyze audience and purpose, use elements of research, and format documents using standard guidelines. Individuals will develop critical reading skills through analysis of various written documents. Discuss reading and writing academic course support with your Counselor.

INCIDENT RESPONSE...introduces the student to the tools and techniques commonly used for detecting threats to an enterprise infrastructure. Learners will implement strategies for documenting and reporting detected events based on industry standard compliance frameworks. PREREQUISITE: 10150176 Networking 2

INFORMATION SECURITY PRINCIPLES...introduces the learner to Information Systems Security. Students will review and analyze the control and security concerns in the information systems environment; the security challenges created from the emergence of new technology and the changing internal and external environments; and the effect of legal, regulatory, and current security technology on policy development.

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. Discuss reading academic course support with your Counselor.

INTRODUCTION TO SOCIOLOGY...introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues. Discuss reading academic course support with your Counselor.

INTRUSION DETECTION...introduces the learner to the most commonly used tools organizations use to detect and prevent network intrusions. Participants will get hands-on experience implementing and configuring intrusion detection and intrusion prevention systems (IDS/IPS). PREREQUISITE: 10150176 Networking 2

LINUX...is a hands-on course designed to provide the learner with the skills to install the Linux operating system, use its command-line and graphical user interfaces, manage system resources, and create scripts. The course will also introduce the learner to Linux system administration including the installation and administration of users, files, software, networking, and Internet and Intranet services.

MATH & LOGIC...will apply mathematical problem solving techniques. Topics will include symbolic logic, sets, algebra, Boolean algebra, and number bases. Discuss math and reading academic course support with your Counselor.

NETWORK FORENSICS AND THREAT HUNTING...provides the learner with a first look at some of the tools, techniques, and procedures used for network-based forensics and threat hunting. Participants will collect and correlate current and historic network data to create a profile of an attack for post-incident investigations and reporting or proactive threat hunting. PREREQUISITE: 10150176 Networking 2

NETWORK SECURITY...introduces the student to the various methodologies for defending a network. Learners will develop an in-depth theoretical understanding of network security principles as well as the tools and configurations available. The learner will emphasize on the practical application of skills needed to design, implement, and support a secure Cisco network. PREREQUISITE: 10150163 Networking 3

NETWORKING 1...is a lecture/hands-on course designed to introduce students to network fundamentals. Topics covered include: OSI Reference Model; LAN and WAN topologies; cabling systems; access methods; protocols; Internet working devices (e.g. hubs, bridges, routers, switches, etc.); and basic network design.

NETWORKING 2...provides the students with networking terminology, protocols, network standards, LAN's, WAN's, TCP/IP addressing, and routing. PREREQUISITE: 10150114 Networking 1

NETWORKING 3...introduces the student to switching technology, hardware and software firewalls, and virtual private networks (VPN). PREREQUISITE: 10150176 Networking 2

NETWORKING 4...focuses on configuring, managing, and monitoring a firewall in a lab environment. Successful completion of this course enhances the student's understanding of how to configure and manage next-generation firewalls. PREREQUISITE: 10150176 Networking 2

PC SUPPORT...prepares you to be able to install, manage, repair, and troubleshoot PC hardware and Windows, Linux, and Mac operating systems. You will learn how to set up a new computer, identify system requirements, install or upgrade operating systems, manage external devices, troubleshoot common computer problems, and connect to a small home network. Opportunity to earn TestOut PC Pro Certification.

PENETRATION TESTING...provides the learner with an overview of the tools and techniques commonly used for penetration testing. Through hands-on exercises, students will learn the proper selection and application of a given tool for the intended task. Also included are strategies for documenting and reporting on the outcome of the test. Students will demonstrate the ability to plan and execute a basic network security audit in a simulated business environment. PREREQUISITE: 10150176 Networking 2

SERVER ADMINISTRATION 1...is a hands-on course designed to introduce the learner to the installation and configuration of Windows Server servers. The student will learn how to install and configure servers, configure server roles and features, configure Hyper-V, deploy and configure core network services, install and administer Active Directory (AD), and create and manage Group Policy. PREREQUISITE: 10154124 Information Security Principles

SPEECH...explores the fundamentals of effective oral presentation to small and large groups. Topic selection, audience analysis, methods of organization, research, structuring evidence and support, delivery techniques, and other essential elements of speaking successfully, including the listening process, form the basis of the course. Discuss reading academic course support with your Counselor.

VIRTUALIZATION...is a hands-on course designed to introduce the learner to the skills needed to install, configure, and manage a highly available and scalable virtual infrastructure. Objectives include: create, configure, migrate, manage, and monitor virtual machines and virtual appliances; manage user access to the virtual infrastructure; and configure and manage virtual network and storage systems. PREREQUISITE: 10154124 Information Security Principles