

# INFORMATION TECHNOLOGY & NETWORKING

Specialization: Cyber Security



## ABOUT THIS DEGREE PROGRAM



### A FOUNDATION IN TECHNOLOGY

This program is anchored with Tech Core, curriculum designed to help you build a foundation of interdisciplinary skills you'll need for today's Internet of Things (IoT) economy. You'll learn relevant skills in operating systems, programming, hardware, connectivity and security – giving you a hands-on foundation in engineering technology, information technology and software and information systems.

### A PROGRAM TO FUEL YOUR FUTURE

In this specialization, you'll work to become the first line of defense against online attacks by learning to build defense mechanisms to protect applications, systems and networks. Explore network security testing, including countermeasure testing and the risk factor analysis needed to design a flexible and comprehensive security plan. Gain advanced skills to provide for business continuity and disaster recovery.

### IS THIS PROGRAM FOR YOU?

If you're interested in a career in information technology (IT) and have a passion for keeping data and networks secure from cyber criminals, this IT degree focused on cyber security may be the right fit for you.

## CAREER OPPORTUNITIES

Graduates of DeVry's [Information Technology and Networking degree program with a specialization in Cyber Security](#) may consider, but are not limited to, the following careers:

- Computer Network Support Specialist
- Computer Systems Analyst
- Information Security Analyst
- Penetration Tester (Ethical Hacker)
- Security Analyst
- Vulnerability Assessor

## WHAT YOU'LL LEARN

### ESSENTIALS

- Communicate methods and findings
- Collaborate in dynamic work environments
- Solve complex problems
- Analyze numerical data
- Apply appropriate technologies

### TECH CORE

- Produce, secure, operate and troubleshoot small enterprise networks
- Network, secure and deploy digital devices and sensors into the IoT ecosystem
- Solve technical problems using an algorithmic approach and basic programming and coding methods
- Install and configure operating systems using command-line interface (CLI)

### PROGRAM

- Develop applications in an IDE framework
- Design LANs and VLANs
- Understand architecture and design
- Understand operation, regulation and trends

### SPECIALIZED

- Apply behavioral analytics to networks and devices to prevent, detect, and counter cybersecurity threats through continuous security monitoring
- Develop a balanced perspective on the administrative and technological elements of information security
- Apply principles of technology in the building, testing, operation and maintenance of connected and distributed digital-based systems and networks

## QUICK FACTS

**120**  
CREDIT HOURS  
minimum credit hours required for graduation

**32%**  
GROWTH  
nationally from 2022-2032 for Employment of Information Security Analysts<sup>1</sup>



### NICCS VERIFIED CURRICULUM

DeVry University's cybersecurity curriculum is acknowledged and verified as an approved provider by the National Initiative for Cybersecurity.



### SKILL FOCUSED CURRICULUM

Elements of our technology curriculum help prepare you to pursue certification opportunities that can validate your knowledge and skills.

- CompTIA Security +
- CompTIA CySA+
- CompTIA PenTest+
- EC-Council CEH

**MINIMUM COMPLETION TIME\***

**2 years  
8 months**

OR

**NORMAL COMPLETION TIME\*\***

**4 years**

### ACCELERATE AT YOUR PACE

Choose the schedule that best fits your goals and commitments. You can earn your **Bachelor's Degree** in as little as **2 years 8 months**.

Or, follow a normal schedule and complete your program in 4 years.

\*Per 12-month period, assumes completion of 3 semesters, enrollment in 12-19 credit hours per semester and continuous, full-time year-round enrollment with no breaks.

\*\*Per 12-month period, assumes completion of 2 semesters and full-time enrollment in 12-19 credit hours per semester.

<sup>1</sup><https://www.bls.gov/ooh/computer-and-information-technology/information-security-analysts.htm>. Growth projected on a national level. Local growth will vary by location. BLS projections are not specific to DeVry University students or graduates and may include earners at all stages of their career and not just entry level.

# Information Technology & Networking | Cyber Security

## ESSENTIALS

**51**  
CREDIT HOURS

### COMMUNICATION SKILLS

ENGL112	Composition
ENGL135	Advanced Composition
ENGL216	Technical Writing

*Select one*

SPCH275	Public Speaking
SPCH276	Intercultural Communication ☺

### HUMANITIES

LAS432	Technology, Society, and Culture ☺
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*Select one*

ETHC232	Ethical and Legal Issues in the Professions
ETHC334	Diversity, Equity and Inclusion in the Workplace ☺

### SOCIAL SCIENCES

ECON312	Principles of Economics
SOCS185	Culture and Society ☺

*Select one*

SOCS325	Environmental Sociology
SOCS350	Cultural Diversity in the Professions ☺

### MATHEMATICS AND NATURAL SCIENCES

MATH114	Algebra for College Students
MATH234	Discrete Math in Information Technology
PHYS204	Applied Physics with Lab
TECH221	Data-Driven Decision -Making

### PERSONAL AND PROFESSIONAL DEVELOPMENT

CARD405	Career Development
COLL148	Critical Thinking and Problem-Solving



#### BE AN ACTIVE PART OF AN INCLUSIVE FUTURE

Customize your curriculum by choosing Diversity, Equity and Inclusion (DE&I) course alternates for your Communication Skills, Humanities and Social Science courses. These course options – denoted by this icon – highlight relevant topics to help empower you to promote an inclusive workplace.

## TECH CORE

**21**  
CREDIT HOURS

### TECH CORE

CEIS101	Introduction to Technology and Information Systems
CEIS106	Introduction to Operating Systems
CEIS110	Introduction to Programming
CEIS114	Introduction to Digital Devices
NETW191	Fundamentals of Information Technology and Networking
NETW212	Introduction to Cloud Computing
SEC285	Fundamentals of Information System Security

## PROGRAM

**36**  
CREDIT HOURS

### INFORMATION SYSTEMS AND PROGRAMMING

CEIS150	Programming with Objects
CEIS236	Database Systems and Programming Fundamentals
SEC313	Applied AI for Cybersecurity

### NETWORK SYSTEMS ADMINISTRATION

NETW260	Intermediate Information Technology and Networking I
NETW270	Intermediate Information Technology and Networking II
NETW310	Wired, Optical and Wireless Communications with Lab
NETW404	Data Center Virtualization
TECH408	Applied AI for Management and Technology

### CAREER PREPARATION

CEIS298	Introduction to Technical Project Management
CEIS499	Preparation for the Profession
MGMT404	Project Management
TECH460	Senior Project

## SPECIALIZED

**14**  
CREDIT HOURS

### CYBER SECURITY

SEC290	Fundamentals of Infrastructure Security
SEC395	Cybersecurity Architecture and Engineering
SEC399	Cybersecurity Career Preparation

*One of:*

SEC311	Ethical Hacking
SEC322	Penetration Testing

*One of:*

SEC305	Cybersecurity and Data Privacy
SEC340	Business Continuity
SEC380	Cloud Computing Security
SEC440	Information Systems Security Planning and Audit
SEC455	Security Operations Center

### Demonstrate Skills at Every Step

#### BACHELOR'S

#### ASSOCIATE

**CERTIFICATE**  
**23**  
CREDIT HOURS

**60**  
CREDIT HOURS

**120**  
CREDIT HOURS

### EMBEDDED PROGRAMS

Earn two additional credentials with our unique 3-in-1 design. All courses in our Networking Essentials certificate and Information Technology and Networking associate degree are embedded within this program. So you can earn a certificate and an associate degree on the way to your bachelor's degree.

The figures displayed represent the minimum credit hours required for graduation. Additional coursework may be necessary to complete program requirements.

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In New York, DeVry University operates as DeVry College of New York. DeVry University is accredited by The Higher Learning Commission (HLC), [www.hlcommission.org](http://www.hlcommission.org). The University's Keller Graduate School of Management is included in this accreditation. DeVry is certified to operate by the State Council of Higher Education for Virginia. Arlington Campus: 1400 Crystal Dr., Ste. 120, Arlington, VA 22202. DeVry University is authorized for operation as a postsecondary educational institution by the [Tennessee Higher Education Commission](http://www.tn.gov/thec), [www.tn.gov/thec](http://www.tn.gov/thec). Lisle Campus: 4225 Naperville Rd., Ste. 400, Lisle, IL 60532. Unresolved complaints may be reported to the Illinois Board of Higher Education through the online complaint system <https://complaints.ibhe.org/> or by mail to 1 N. Old State Capitol Plaza, Ste. 333, Springfield, IL 62701-1377. Program availability varies by location. In site-based programs, students will be required to take a substantial amount of coursework online to complete their program. ©2024 DeVry Educational Development Corp. All rights reserved. Version 3/11/2024