

# COMPUTER INFORMATION SYSTEMS

Specialization: Cyber Security Programming



## ABOUT THIS DEGREE PROGRAM

### TECH CORE

#### 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

Learn protocols and techniques necessary to secure and protect sensitive information and financial assets. You'll also learn how cybersecurity teams work to secure, implement and maintain robust information security systems and networks from cyberattack.

#### IS THIS PROGRAM FOR YOU?

Want to pursue a career in computer information systems and interested in cybersecurity programming, code security and secure applications? This program may be the right fit for you.



#### CERTIFICATION EXAM REIMBURSEMENT

We reimburse qualified students up to \$300 for the cost of one industry certification exam attempt across a wide range of fields.

## CAREER OPPORTUNITIES

Graduates of DeVry's [Computer Information Systems degree program with a Specialization in Cyber Security Programming](#) may consider, but are not limited to, the following careers:

- Computer Programmer
- Information Security Analyst
- Computer Security Specialist
- Data Security Administrator
- Cyber Security Specialist
- Software Developer

## WHAT YOU'LL LEARN

### ESSENTIALS

- Communicate methods and findings
- Collaborate in dynamic work environments
- Analyze numerical data

### 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

- Use advanced programming techniques
- Develop applications
- Understand network types and designs

### SPECIALIZED

- Apply security principles and practices to maintain operations in the presence of risks and threats.
- Apply behavioral analytics to networks and devices to prevent, detect, and counter cybersecurity threats through continuous security monitoring.
- Deploy strategies for cybercrime investigation and for forensic analysis and incident response.
- Maintain network security by leveraging an attacker's knowledge on exploiting vulnerabilities.
- Utilize appropriate tools and techniques to perform penetration testing and analyze testing results.
- Apply cybersecurity skills needed to secure in-house, cloud-centric and hybrid IT environments.
- Simulate a security operations center (SOC) team applying core competencies to detect, analyze, respond to, and mitigate security incidents.

## QUICK FACTS

**124**  
CREDIT HOURS  
minimum credit hours  
required for graduation

**33%**  
GROWTH  
nationally from 2023-2033  
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 Careers and Studies (NICCS).



### 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 CASP+
- CompTIA PenTest+
- EC-Council CEH

<b>MINIMUM COMPLETION TIME*</b>	<b>NORMAL COMPLETION TIME**</b>
<b>2 years 8 months</b>	<b>4 years</b>

OR

### ACCELERATE ON YOUR SCHEDULE

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.

\*Minimum completion time does not include breaks and assumes 3 semesters of year-round, full-time enrollment in 12-19 credit hours a semester per 12-month period.  
\*\*Normal completion time includes breaks and assumes 2 semesters of enrollment in 12-19 credit hours per semester per 12-month-period.

<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.

# Computer Information Systems | Cyber Security Programming

## ESSENTIALS

**47**  
CREDIT HOURS

### COMMUNICATION SKILLS<sup>1</sup>

ENGL112 <sup>2</sup>	Composition
ENGL135	Advanced Composition
ENGL216	Technical Writing

*Select one*

SPCH275	Public Speaking
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### HUMANITIES

LAS432	Technology, Society, and Culture
ETHC232	Ethical and Legal Issues in the Professions

### SOCIAL SCIENCES

ECON312	Principles of Economics
SOCS185	Culture and Society
SOCS325 <sup>3</sup>	Environmental Sociology

### MATHEMATICS AND NATURAL SCIENCES

MATH114	Algebra for College Students
TECH204	Everyday Physics
TECH221	Data-Driven Decision-Making

### PERSONAL AND PROFESSIONAL DEVELOPMENT

CARD405	Career Development
COLL148	Critical Thinking and Problem-Solving

## 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

**41**  
CREDIT HOURS

### INFORMATION SYSTEMS AND PROGRAMMING

CEIS150	Programming Objects
CEIS209	Intermediate Programming
CEIS236	Database Systems and Programming Fundamentals
CIS313	AI-Driven Business Application Coding
CIS355A	Business Application Programming with Lab

### INFORMATION TECHNOLOGY AND NETWORKING

SEC290	Fundamentals of Infrastructure Security
SEC305	Cybersecurity and Data Privacy
SEC311	Ethical Hacking
SEC322	Penetration Testing

### CAREER PREPARATION

CEIS298	Introduction to Technical Project Management
MGMT404	Project Management
SEC399	Cybersecurity Career Preparation
TECH460	Senior Project

<sup>1</sup>14 for students enrolled at a New Jersey location

<sup>2</sup>Students enrolled at a New Jersey location take ENGL108 in lieu of this course.

<sup>3</sup>Students enrolled at a Nevada location must take POLI332 in lieu of this requirement.

Students enrolled at a New Jersey location must take an additional six semester-credit hours of general education coursework from among the following course areas: communication skills, humanities, social sciences, mathematics and natural sciences. Courses selected in humanities or social sciences should be upper-division coursework (DeVry courses numbered 300-499).

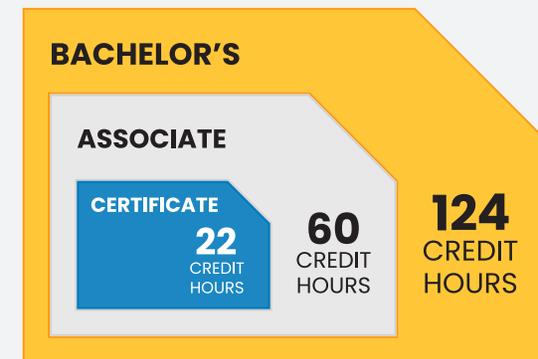
## SPECIALIZED

**15**  
CREDIT HOURS

### CYBER SECURITY PROGRAMMING

SEC335	Incident Response and Digital Forensics
SEC395	Cybersecurity Architecture and Engineering
SEC440	Information Systems Security Planning and Audit
SEC455	Security Operations Center

### Demonstrate Skills at Every Step



### EMBEDDED PROGRAMS

Earn two additional credentials with our unique 3-in-1 design. All courses in our Programming Essentials Undergraduate Certificate Program and Information Technology and Networking Associate Degree Program 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. Future programmatic changes could impact the ability to earn additional credentials en route to an eligible degree program. Refer to the academic catalog for details.route to an eligible degree program. Refer to the academic catalog for details.

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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](https://www.tn.gov/thec), [www.tn.gov/thec](https://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 compliant 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. ©2025 DeVry Educational Development Corp. All rights reserved. Version 3/2025