



# Cybersecurity

Certificate (48 SCH\*)

\*Semester Credit Hour

7/2023

## First Semester - 12 SCH

COSC 1301 - Introduction to Computing  
ITCC 1314 - CCNA 1: Introduction to Networks  
ITSC 1305 - Introduction to PC Operating Systems  
ITSY 1300 - Fundamentals of Information Security

## Second Semester - 12 SCH

ITCC 1344 - CCNA 2: Switching, Routing, and Wireless Essentials  
ITSY 1342 - Information Technology Security  
ITNW 1354 - Implementing and Supporting Servers  
ITNW 2305 - Network Administration

## Third Semester - 12 SCH

ITSY 2330 - Intrusion Detection  
ITSY 2300 - Operating System Security  
ITSY 2301 - Firewalls and Network Security  
ITSC 1325 - Personal Computer Hardware

## Fourth Semester - 12 SCH

ITSY 2343 - Computer System Forensics  
ITSY 2342 - Incident Response & Handling  
ITSY 2345 - Network Defense and Countermeasures  
GAME 1301 - Computer Ethics

## Marketable Skills

- Interacting with Computers
- Gathering Information
- Identifying Objects, Actions, and Events
- Ethics
- Evaluating Information
- Analyzing Data or Information
- Identifying underlying principles, reasons, or facts
- Implement security measures
- Collaborate with others to resolve issues

## Program Outcomes

- Ability to conduct risk and vulnerability assessments of existing and proposed networked systems.
- Demonstrate an understanding of cyber defense and attack methods.
- Show how ethical issues impact decision making in the cybersecurity area.
- Demonstrate techniques to design a secure network.
- Troubleshoot an information security system.

## High School Endorsements

Business and Industry

## Expected Salary

**Texas wage data:** workers on average earn \$110,680; 10% of workers earn \$67,660 or less; 10% of workers earn \$165,070 or more.

## Additional Education Opportunities

Students may continue their education through a Bachelor of Arts in Applied Science degree, in addition to various industry certifications.

## Career Opportunities

Information Security Analyst; Cybersecurity Engineer; Network Security Engineer; Vulnerability Analyst/Penetration Tester; Cybersecurity Consultant; Security Architect; Security Auditor; Security Specialist; Computer Forensics Analyst; Ethical Hacker.