

Cyber Intelligence and Security (CISE)

CISE 119 Introduction to Cyber Security for Non-Majors 3 Credits (3,0)

Comprehensive overview of cybersecurity; internet concepts; computer systems; data relationships; hands-on exercises; interactive labs.

Course Offered at: Prescott

CISE 120 Introduction to Cyber Security Majors 3 Credits (3,0)

Comprehensive overview of cybersecurity; internet concepts; computer systems; data relationships; hands-on exercises; interactive labs.

Course Offered at: Prescott

CISE 199 Special Topics in Cyber Intelligence and Security 1-6 Credit (1-6,0)

Individual, independent, or directed studies of selected topics in cyber intelligence and security.

Course Offered at: Daytona Beach, Prescott

CISE 201 Introduction to Linux, Unix, Windows, and Scripting 3 Credits (3,0)

Command-line use and shell scripting in Linux, Unix, and Windows; file systems; virtual machines; user commands; privilege settings; system commands; text editors; shell programming.

Course Offered at: Prescott

CISE 299 Special Topics in Cyber Intelligence and Security 1-6 Credit (1-6,0)

Individual, independent, or directed studies of selected topics in cyber intelligence and security.

Course Offered at: Daytona Beach, Prescott

CISE 311 Securing Computer Networks 3 Credits (3,0)

Network security; encryption techniques; firewalls; intrusion detection; access control; network monitoring; network management; wired and wireless networks; lab demonstrations.

Prerequisites: CPSC 213

Course Offered at: Prescott

CISE 320 Ethical Hacker - Pen Testing 3 Credits (3,0)

Overview of penetration testing tools; legal and ethical concepts; footprinting; network mapping; enumeration; vulnerability exploitation; hands-on lab exercises using tools like nmap, metasploit, nessus.

Prerequisites: CISE 311

Course Offered at: Prescott

CISE 330 Software Security 3 Credits (3,0)

Secure programming techniques; identifying security flaws; implementing countermeasures; developing resilient code; major security principles in high-level programming languages; OWASP frameworks for secure web applications.

Prerequisites: CPSC 213

Course Offered at: Prescott

CISE 340 Database System Security 3 Credits (3,0)

Secure design of database systems; problem-solving in database security; project-based learning.

Prerequisites: CISE 311

Course Offered at: Prescott

CISE 350 Mobile and Cloud Computing Security 3 Credits (3,0)

Introduces security principles, challenges, and technologies specific to mobile platforms and cloud computing environments.

Prerequisites: CISE 311

Course Offered at: Prescott

CISE 359 Cyber Threat Intelligence for Non-Majors 3 Credits (3,0)

Foundations in cyber threat intelligence methodologies for identifying, analyzing, and reporting on emerging cyber threats.

Prerequisites: CISE 119

Course Offered at: Prescott

CISE 360 Cyber Threat Intelligence Majors 3 Credits (3,0)

Foundations in cyber threat intelligence methodologies for identifying, analyzing, and reporting on emerging cyber threats.

Prerequisites: CISE 320

Course Offered at: Prescott

CISE 399 Special Topics in Cyber Intelligence and Security 1-6 Credit (1-6,0)

Individual, independent, or directed studies of selected topics in cyber intelligence and security.

Course Offered at: Daytona Beach, Prescott

CISE 410 Malware Analysis 3 Credits (3,0)

Art and science of malware analysis; malware development; malware behavior; malware detection and analysis; hands-on experience with common software toolkits.

Prerequisites: CISE 320

Course Offered at: Prescott

CISE 450 Computer Forensics II 3 Credits (3,0)

Advanced computer forensics; data and disc image capture; file system regeneration; traffic capture and analysis; use of common software toolkits; evidence documentation; legal and ethical standards.

Prerequisites: CPSC 304

Course Offered at: Prescott

CISE 460 Big Data Analytics and Machine Learning 3 Credits (3,0)

Fundamentals of big data analytics; statistics; machine learning; data science; vulnerabilities from fake data generation; security issues and controls; case studies using open-source tools for applied understanding of big data and AI technologies.

Prerequisites: MATH 314

Course Offered at: Prescott

CISE 470 Aviation Cyber Security 3 Credits (3,0)

Cybersecurity in aviation systems; aircraft, air traffic control, airport, and airline systems; threats, risks, mitigations; industry standards; hands-on skills development; team project.

Course Offered at: Prescott

CISE 480 Emerging Topics in Cybersecurity 3 Credits (3,0)

This course explores cybersecurity threats, risks, and mitigation strategies within critical cyber-physical infrastructure sectors, using case studies, industry standards, and tools to analyze real-world systems such as in transportation.

Course Offered at: Prescott

CISE 490 Cyber Capstone Project 3 Credits (3,0)

Design, develop, and present a comprehensive cybersecurity project; identify threats; mitigation and defense strategies; mock cyber disaster drill; team-based project.

Course Offered at: Prescott

CISE 492 Senior Thesis 3 Credits (3,0)

Research on a selected topic in cybersecurity; literature review; extensive research; originality in analysis; faculty committee supervision; oral defense.

Course Offered at: Prescott

CISE 499 Special Topics in Cyber Intelligence and Security 1-6 Credit (1-6,0)

Individual, independent, or directed studies of selected topics in cyber intelligence and security.

Course Offered at: Daytona Beach, Prescott