



Penetration Testing

UWF Florida Cybersecurity Training Program
Offered by the University of West Florida Center for Cybersecurity

Course Overview

Course Dates: February 9 - 20, 2026

Duration: 2 weeks

Estimated Time Commitment: 10 hours per week

Instructional Hours: 15 contact hours

Delivery Format: Asynchronous online

Target Audience: Courses: IT and Cybersecurity practitioners

Required Background: Learners should be comfortable using the internet and have a basic understanding of how the internet works.

CEUs: 1.5, **CPEs:** 18

Course Instructor(s):

Instructor	Email
Dr. Elizabeth Rasnick	erasnick@uwf.edu

Course Description

Module 1: Introduction to Penetration Testing

1. Overview of Penetration Testing
2. Ethical Hacking vs. Cybersecurity
3. Penetration Testing Methodologies (OWASP, PTES)
4. Legal and Ethical Considerations
5. Tools and Techniques Overview

Module 2: Reconnaissance and Information Gathering

1. Passive vs. Active Reconnaissance
2. Tools for Information Gathering (WHOIS, DNS, OSINT)
3. Social Engineering Techniques
4. Scanning and Enumeration
5. Building Target Profiles



Module 3: Scanning and Vulnerability Assessment

1. Network Scanning Techniques
2. Vulnerability Scanning Tools (Nessus, OpenVAS)
3. Identifying and Exploiting Vulnerabilities
4. Risk Assessment and Management
5. Reporting Findings

Module 4: Exploitation Techniques

1. Types of Exploits (Remote, Local)
2. Exploitation Frameworks (Metasploit)
3. Exploit Development Basics
4. Post-Exploitation Techniques
5. Maintaining Access

Module 5: Reporting and Remediation

1. Documenting Findings
2. Writing Effective Penetration Testing Reports
3. Remediation Strategies
4. Communicating Results to Stakeholders
5. Continuous Improvement and Learning

Cybersecurity Workforce Framework Mappings

The course prepares for the following cybersecurity work roles as defined by the DoD Cyber Workforce Framework (DCFW) and the NICE Cybersecurity Workforce Framework.

DoD Cybersecurity Work Roles and Categories:

- Cybersecurity Penetration Tester (CND-PT)
- Vulnerability Assessment Analyst (CND-VA)
- Information Systems Security Officer (ISSO)
- Incident Response Analyst (CND-IR)
- Cybersecurity Analyst (CND-AN)

NICE Cybersecurity Work Roles and Categories:

- Penetration Tester (CE-PT-001)
- Vulnerability Analyst (CE-VA-001)
- Security Analyst (CND-AN-001)
- Incident Responder (CND-IR-001)
- Cyber Defense Analyst (CND-CDA-001)