

# PIT-142 FORTINET CERTIFIED PROFESSIONAL CYBERSECURITY NEW 11/25

## ARIZONA WESTERN COLLEGE SYLLABUS

### PIT 142 FORTINET CERTIFIED PROFESSIONAL CYBERSECURITY

Credit Hours:   3   Lec   2   Lab   2  

PREREQUISITE:           PIT           141

COREQUISITE:

#### COURSE DESCRIPTION

This dynamic course utilizes advanced Fortinet network security technologies to offer students immersive, hands-on lab experiences, fostering the application of theoretical knowledge in practical settings. Students will gain comprehensive practical experience implementing and managing advanced network security solutions. Students will focus on designing, administering, monitoring, and troubleshooting Fortinet operational technology (OT). Students will learn how to design secure OT networks, configure and monitor security operations infrastructure, and implement Zero Trust Access (ZTA) frameworks. Additionally, students will explore advanced topics such as threat intelligence, advanced threat protection, and network segmentation. Students will possess the skills necessary to be well-prepared to pursue the specialist-level credential by passing the Network Security Expert (NSE) Professional exam.

#### 1. COURSE GOAL

- 1.1 The program aims to allow individuals to acquire cybersecurity skills and knowledge that are in high demand in the industry. The program focuses on security devices, public cloud devices, VMs, and security operations devices.
- 1.2 Develop the ability to identify, analyze and resolve common security and connectivity issues.
- 1.3 Introduction to advanced configuration management.
- 1.4 Manage User Identity and authentication and their configurations.
- 1.5 Prepare students for the Fortinet Certified Professional Cybersecurity exams.

#### 2. OUTCOMES

Upon satisfactory completion of this course, students will be able to:

- 2.1 Use tools, diagnostics, and debug commands to detect, isolate, and resolve problems like IPsec, routing, web filtering, and configuration management.
- 2.2 Manage an enterprise security infrastructure composed of multiple FortiGate devices to design, deploy, administrate, and monitor FortiGate, FortiNAC, FortiAnalyzer, and FortiSIEM devices to secure OT infrastructures.
- 2.3 Troubleshoot deployments in Azure and how to use tools to simplify risk management for on-prem, hybrid and cloud-based workloads.
- 2.4 Transition students from conceptual understanding to hands-on application of network security principles and controls.
- 2.5 Use nested queries and lookup tables for advanced analytics.
- 2.6 Use logging, reporting and diagnostic tools to identify issues and optimize security operations.
- 2.7 Configure network security appliances, endpoint management systems, authentication services, network access control, and security analytics tools to secure network and

application access, monitor Zero-Trust Architecture and its enforcement, and automate incident response.

3. METHODS OF INSTRUCTION

- 3.1 Lecture
- 3.2 Multi-media Presentations
- 3.3 Group Discussions

4. LEARNING ACTIVITIES

- 4.1 Group Discussions
- 4.2 Digital Presentations
- 4.3 Interactive In-Person and Virtual Practice

5. EVALUATION

- 5.1 Quizzes/Exams
- 5.2 Assignments
- 5.3 Participation

6. STUDENT RESPONSIBILITIES

- 6.1 Under AWC Policy, students are expected to attend every session of class in which they are enrolled.
- 6.2 Classroom Assignments: Students are responsible for work missed and for completing all work before the next class meeting. Students are responsible for participating in all oral drills and for taking all exams.
- 6.3 If a student is unable to attend the course or must drop the course for any reason, it will be the responsibility of the student to withdraw from the course. Students who are not attending as of the 45th day of the course may be withdrawn by the instructor. If the student does not withdraw from the course and fails to complete the requirements of the course, the student will receive a failing grade.
- 6.4 Americans with Disabilities Act Accommodations: Arizona Western College provides academic accommodations to students with disabilities through AccessABILITY Resource Services (ARS). ARS provides reasonable and appropriate accommodations to students who have documented disabilities. It is the responsibility of the student to make the ARS Coordinator aware of the need for accommodations in the classroom prior to the beginning of the semester. Students should follow up with their instructors once the semester begins. To make an appointment call the ARS front desk at (928) 344-7674 or ARS Coordinator at (928) 344-7629, in the College Community Center (3C) building, next to Advising.
- 6.5 Academic Integrity: Any student participating in acts of academic dishonesty including, but not limited to, copying the work of other students, using unauthorized “crib notes”, plagiarism, stealing tests, or forging an instructor’s signature—will be subject to the procedures and consequences outlined in AWC’s Student Code of Conduct.
- 6.6 Textbooks and materials: Students are required to bring notebook or looseleaf book, pens, pencils, dictionaries, and purchase textbook required for class.
- 6.7 Arizona Western College students are expected to attend every class session in which they are enrolled. To comply with Federal Financial Aid regulations (34 CFR 668.21),

Arizona Western College (AWC) has established an Attendance Verification process for "No Show" reporting during the first 10 days of each semester.

Students who have enrolled but have never attended class may be issued a "No Show" (NS) grade by the professor or instructor and receive a final grade of "NS" on their official academic record. An NS grade may result in a student losing their federal financial aid.

For online classes, *student attendance in an online class is defined as the following* (FSA Handbook, 2012, 5-90):

- Submitting an academic assignment
- Taking an exam, an interactive tutorial or computer-assisted instruction
- Attending a study group that is assigned by the school
- Participating in an online discussion about academic matters
- Initiating contact with a faculty member to ask a question about the academic subject studied in the course