ARIZONA WESTERN COLLEGE SYLLABUS

PIT 141 FORTINET CERTIFIED ASSOCIATE CYBERSECURITY
Credit Hours: _3__ Lec __2_ Lab __2__
PREREQUISITE: PIT 140
COREQUISITE:

COURSE DESCRIPTION

This comprehensive course leverages Fortinet network security technologies to provide students with immersive, hands-on lab experiences, allowing them to apply their theoretical knowledge in practical settings. Students will learn how to secure networks and applications, encompassing the deployment, management, and monitoring of Fortinet network security products, public cloud products, and security operations products. Students will gain extensive practical experience in implementing and maintaining secure network infrastructures and learn how to configure advanced firewall policies, secure remote access through virtual private networks (VPNs), implement secure web applications, and utilize advanced threat protection mechanisms. Additionally, students will explore security operations practices, including vulnerability management, incident response, and security event analysis. By engaging with Fortinet technologies in real-world scenarios, students will develop expertise in network security concepts and acquire the skills necessary to address complex cybersecurity challenges. The course prepares students for three professional-level credentials and equips them with the knowledge and practical experience required for success in advanced network security. Students will possess the skills necessary to protect critical network infrastructure and be well-prepared to pursue the professional-level credential by passing the Network Security Expert (NSE) Associate 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.
   - 1.2 Configure and secure network infrastructure to ensure confidentiality, integrity and availability.
   - 1.3 Integrate and manage network services for scalability and performance.
   - 1.4 Monitor, analyze, and troubleshoot network performance and security events.
   - 1.5 Prepare students for the Fortinet Certified Associate Cybersecurity exams.

2. OUTCOMES

   Upon satisfactory completion of this course, students will be able to:
   - 2.1 Deploy and configure network devices within cloud and on-premises environments.
   - 2.2 Inspect and analyze network traffic, troubleshoot issues and evaluate network performance to detect threats.
   - 2.3 Diagnose further network issues and understand how to troubleshoot policy enforcement problems.
   - 2.4 Configure security profiles to neutralize threats and misuses, including viruses, torrents, and inappropriate websites.
   - 2.5 Apply port forwarding, source NAT, and destination NAT.
   - 2.6 Deploy, configure, manage, and troubleshoot a FortiSOAR high-availability cluster.

2.7 Design and implement reliable network topologies to ensure scalability and high availability.

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 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