ARIZONA WESTERN COLLEGE
SYLLABUS

PIT 142 FORTINET CERTIFIED SOLUTION SPECIALIST 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) Solutions Specialist 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 explicitly on Fortinet network security devices, public cloud devices, VMs, and security operations devices. The certification courses are related to the Fortinet Network Security Expert (NSE) professional-level certification.
      1.2 Prepare students for the Fortinet Certified Solutions Specialist 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 related to the most commonly used FortiGate features, such as IPsec, routing, web filtering, HA, and IPS.
      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 FortiGate deployments in Azure and how to use FortiCNP to simplify risk management for AWS workloads.
      2.4 Use nested queries and lookup tables for advanced analytics using FortiSIEM.
      2.5 Configure FortiGate, FortiClient EMS, FortiAuthenticator, FortiNAC, and FortiAnalyzer to secure network and application access, monitor ZTA 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 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