**CSCI 3410 – Enterprise Information Security**

Credits: 3 Section: \_\_\_\_ Term: \_\_\_\_\_\_\_

**Location & Meeting Time**

Classroom location:

Class Meeting Schedule:

**Contact Information**

**Instructor:**
**Email:**
**Phone: (**423) 439-
**Office:**

**Instructor Availability**

Office Hours:

**Course Description & Materials**

*Prerequisites*: C- or better in CSCI 2160, C- or better in CSCI 2200, and C- or better in CSCI 3500
Explores information security topics such as firewalls, access control lists, network address translation, virtual private networks, network topologies and segmentation, demilitarized zones, forward/reverse proxies, and their relationship to the OSI model.

**Required Materials**

[enter textbook, software, tool etc]

**Course Overview**

**Course Purpose and Objectives**

Enterprise information security is designed to train future cybersecurity professionals to architect and implement enterprise information networks that assure the security and availability of the resources those networks provide. Broadly speaking, the expertise these professionals will need involves three areas of concern: protecting networks from unauthorized access; identifying whether a network's prospective users are properly authorized to access it; and providing ready access for duly authorized users, with minimum hassle.  This course will seek to provide students with this expertise by covering the following topics and providing hands-on experience with the topics being covered:

* Configure and deploy security perimeters between a given computer network and users who attempt to access that network from external sources.
* Validate requests for network access--measures that include the deployment and use of protocols for assuring prospective users' identities, including digital signatures, certificate authorities, and the X.509 certification standard.
* Provide ready access to networked resources--measures for affording external users efficient, effective, and secure access to a protected network, mostly involving a family of cryptographic, network-based protocols for information exchange known as virtual private networks.

 **Expected Learning Outcomes**

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| Upon completion of the course, students will:1. Deploy secure communications across a network.
2. Create a firewall to support secure network access given a network topology.
3. Implement technical controls to support a given security policy.
4. Analyze logs to detect network traffic patterns and improve performance or detect malicious traffic.

**Major Course Topics**

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| * Blocking Bogus Networks (BOGONS)
* Blocking Nations, Firms, and Individuals
* Blocking Inbound and Outbound Ports and Protocols
* Anti-spoofing Filters
* Firewall Policy
* Internet Use Monitoring
* Blocking Access to Web Sites and Domains
* Blocking Access to Content-Specific Items
* Encryption for Secure Networks
* Virtual Private Network Configuration
* Virtual Private Network Troubleshooting
* Syslog and Syslog NG
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**Course Policies**

**Attendance**

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| Regular on-time class attendance and participation in class and labs is expected. Students arriving late create a distraction for other students and waste their time. Respect for others requires one to be in place and ready to begin at the scheduled time. For lab classes, this means one should be logged in and ready to begin at the designated class starting time.For class sessions where quizzes are given, quizzes will typically begin at the designated class starting time and will be available for students for the first 5 minutes of class. Students arriving late will be unable to take the quiz and will receive a score of 0 on the missed item.When students miss class, it is their responsibility to find out what material they missed and be prepared for upcoming class elements. Students missing days when homework or lab assignments are given should consult other students or refer to Desire2Learn for assignment requirements. Due dates are not adjusted for absentees.

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| Absences | Grade Deduction |
| 0 – 3 | None |
| 4 – 6 | Final Grade lowered by one letter grade (i.e. A to B, B- to C-) |
| 7 or more | Final letter grade of F for the course |

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**Assignment and Grading**

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**Other**

**Syllabus Attachment Information**: The University’s approved Syllabus Attachment Information page provides information about important University and Academic Policies that all students should know. <https://www.etsu.edu/curriculum-innovation/syllabusattachment.php>