Course Rationale:

The CCNA Network Security curriculum provides an introduction to the knowledge and skills needed for monitoring, detecting, investigating, analyzing and responding to security events, thus protecting systems and organizations from cybersecurity risks, threats, and vulnerabilities.

Course Objectives

Network Security helps students develop the skills needed for entry-level network security career opportunities. It provides a theoretically rich, hands-on introduction to network security, in a logical sequence driven by technologies.

The goals of the Network Security course are as follows:

- Provide an in-depth, theoretical understanding of network security.

- Provide students with the knowledge and skills necessary to design and support network security.
- Provide an experience-oriented course that employs industry-relevant instructional approaches to prepare students for entry-level jobs in the industry.

- Enable students to have significant hands-on interaction with IT equipment to prepare them for exams and career opportunities.

Upon completion of the Network Security course, students will be able to perform the following tasks:

- Explain the various types of threats and attacks.
- Explain the tools and procedures to mitigate the effects of malware and common network attacks.

- Configure command authorization using privilege levels and role-based CLI.

- Implement the secure management and monitoring of network devices.

- Configure AAA to secure a network.
- Implement ACLs to filter traffic and mitigate network attacks on a network.
- Implement Zone-Based Policy Firewall using the CLI.

- Explain how network-based Intrusion Prevention Systems are used to help secure a network.

- Explain endpoint vulnerabilities and protection methods.
- Implement security measures to mitigate Layer 2 attacks.
- Explain how the types of encryption, hashes, and digital signatures work together to provide confidentiality, integrity, and authentication.

- Explain how a public key infrastructure is used to ensure data confidentiality and provide authentication.
- Configure a site-to-site IPsec VPN, with pre-shared key authentication, using the CLI.

- Explain how the ASA operates as an advanced stateful firewall.

- Implement an ASA firewall configuration.

- Implement an ASA firewall configuration using ASDM (optional).

- Test network security.

Attendance:
See the STA Student Handbook. In summary, students are expected to be present and punctual for all scheduled classes and labs. Please notify your instructor of any absence or attendance concern prior to the absence, if possible.

Curriculum Access:
Students will utilize course materials through our curriculum provider Cisco Networking Academy (**www.netacad.com**) Network Security, as well as utilizing the Netlab remote access lab environment, and potential content from other supplemental materials as recommended by the instructor. Each student will utilize his or her personal username and password combination to the curriculum providers' websites. Students should remember not to share their curricular access or they will be in violation of the respectable user agreement and may lose access to the course materials.

Code of Conduct:
Students are expected to conduct themselves in a manner consistent with the educational purpose of this institution. Conduct deemed unacceptable toward maintaining a proper educational atmosphere will subject the student to disciplinary action in accordance with STA and LSR-7 policies.

Grading Scale:

95 - 100	A	73 - 76	C
90 - 94	A-	70 - 72	C-
87 - 89	B+	67 - 69	D+
83 - 86	B	63 - 66	D
80 - 82	B-	60 - 62	D+
77 - 79	C+	Below 60	F

Grading Rationale:
In this course, the semester grade will consist of the student's evaluated performance. The student's semester grade is calculated by combining the 18-week grade and the required Lee's Summit R-7 semester final exam as follows:

SEMESTER GRADE COMPONENTS	SEMESTER %
• Daily Work (see explanation below)	50%
• Exams (end of chapter or unit)	30%
• CCNA Network Security Skills Exam	10%
Lee's Summit R-7 Semester Final	**10%**
TOTAL SEMESTER GRADE PERCENTAGE	**100%**

Daily Work:
Credit for daily work will consist of a combination of all in-class, out-of-class, and homework assignments not indicated above. These assignments include, but are not limited to the following: quizzes, simulations, packet tracer exercises, Netlab hands on labs, and writing assignments.

Late Assignments:
Assignments that are late due to an Excused Absence must be submitted in accordance with the LSR-7 policy. Any assignment submitted one school day late will be reduced by 25%, two days 50%. Any assignments received 3 or more days late will be awarded no credit.