



WASHINGTON COUNTY COMMUNITY COLLEGE
CALAIS, MAINE

Computer Technology Department
Semester: Spring 2021

COURSE NUMBER: CTT157
COURSE TITLE: Introduction to Network Security
CLASS SCHEDULE: Tuesday, 5:30-8:30PM
CLASS LOCATION: Riverview, Room 318
PREREQUISITES: CTT-140: Introduction to Computer Networking
instructor approval.
CO-REQUISITES: None

INSTRUCTOR: George Chmielecki
PHONE NUMBER: 207-454-1038
OFFICE: Riverview, Room 305
E-MAIL ADDRESS: gchmielecki@wccc.me.edu

OFFICE HOURS: Tuesday and Thursday: 2:00PM – 3:00PM
Wednesday: 2:00PM –4:0PM
Or as scheduled.

TEXTS:

NOTE: All texts are available through [cengage.com/unlimited](https://www.cengage.com/unlimited)

Title: CompTIA Security+ Guide to Network Security Fundamentals , 6th Edition

Author: Mark Ciampa

ISBN: 978-1-337-28878-1

Publisher: Cengage Learning

OTHER MATERIALS:

Required: Notebook (either spiral bound or 3 ring)

Recommended: USB flash drive

COURSE DESCRIPTION:

This course provides an introduction to the fundamentals of network security, including compliance and operational security; threats and vulnerabilities; application, data, and host security; access control and identity management; and cryptography. The course covers new topics in network security as well, including psychological approaches to social engineering attacks, Web application attacks, penetration testing, data loss prevention, cloud computing security, and application programming development security.

COURSE OBJECTIVES:

Students will gain a complete, step-by-step approach for learning the fundamentals of implementing and supporting a security strategy for today's complex computer networks. This course maps to the latest CompTIA Security+ exam objectives and includes a comprehensive guide for anyone wishing to take that exam.

COURSE CONTENT:

Specific topic coverage includes:

- Introduction to Security
- Malware and Social Engineering Attacks
- Basic Cryptography
- Advanced Cryptography and PKI
- Networking and Server Attacks
- Network Security Devices, Design, and Technology
- Administering a Secure Network
- Wireless Network Security
- Host, Application, and Data Security
- Mobile and Embedded Device Security
- Authentication and Account Management
- Access Management
- Vulnerability Assessment and Data Security
- Business Continuity
- Risk Mitigation

Instructional Methodologies: This course will be taught in an open lab, lecture, question and answer format.

Note: Course content may be subject to some changes/modifications per Instructor -- This offered as only a study guide. The pace of each class differs according to the instructional needs of the students in the class.

Unit	Topics	Chapter Readings	Exams
1	Introduction to Security	Chapter 1	
2	Malware and Social Engineering Attacks	Chapter 2	
3	Basic Cryptography	Chapter 3	
4	Advanced Cryptography	Chapter 4	
5	Networking and Server Attacks	Chapter 5	
6	Network Security Devices, Design, and Technology	Chapter 6	
7	Administering a Secure Network Wireless Network Security	Chapter 7 Chapter 8	Midterm Exam
8	Host, Application, and Data Security	Chapter 9	
9	Mobile and Embedded Device Security	Chapter 10	
10	Authentication and Account Management	Chapter 11	
12	Vulnerability Assessment and Data Security	Chapter 13	
13	Business Continuity	Chapter 14	
14	Risk Mitigation	Chapter 15	Final Exam

GRADING:

Exams: Midterm – 20%, Final – 30%
 Labs, Quizzes, Exercises, Homework: 40%
 Attendance and Participation: 10%

GRADING SCALE:

This course follows the standard WCCC grading scale, which can be found in the WCCC College catalog.

Late Assignments: All assignments must be submitted on-time. No late assignments will be accepted once solutions have been made available to the class for review. The lowest “Labs, Assessments & Homework” grade for each student will be dropped.

ELEMENTS OF SUCCESS:

Accountability	Those who are accountable stand by their words and actions, taking full responsibility for what they create and for what they contribute to the community.
Respect	Community members who respect themselves and others help to create a safe, yet open climate of learning.
Responsibility	Students who assume personal responsibility for their education will reach their goals. Responsible students also make contributions to their communities.
Critical Thinking	Instructor and students will strive to improve the critical thinking skills of analysis, synthesis, and evaluation.
Communication	Communicating effectively in oral and written forms through traditional and new media is a powerful tool for personal and career success.
Collaboration	Collaborative teamwork maximizes benefits to individuals and communities. When collaboration is expected, instructors will clearly indicate it. When collaboration is not identified as part of an assignment, students must demonstrate individual skills.

ATTENDANCE POLICY:

The student is responsible for knowing the following attendance policy of the college:

1. In standard academic courses (1-4 credit hours), students may not be absent more than ten percent of the hours the course meets during the term. When a student’s absenteeism exceeds this number, the instructor will refer the student to the Associate Dean of Student Affairs. If the student does not adhere to guidelines set by the instructor or the Associate Dean, proper papers are available in the student services office and must be filed in timely fashion with the Registrar’s Office.
2. Due to the frequency and extended hours in some trade programs that meet in 4 hour, daily blocks, students may not be absent for more than 6.5 percent of the hours the course meets during the term or a total of five (5), 4 hour classes per semester.
3. The instructor must counsel the student that excessive absences will lead to an administrative withdrawal. Additional remedies and obligations, such as mandatory tutoring or time spent in the study center, may be imposed by the instructor or student success team.

4. Any tardiness up to five (5) minutes will be counted as one-half of an absence, and a tardiness of more than five minutes will count as a full absence.
5. The student will be counted absent if he/she leaves class early without prior instructor permission.
6. When dropped from a course for poor attendance, the student may appeal to the Academic Dean for readmission if he/she feels there is justification for the absences. It is the student's responsibility to immediately contact the Academic Dean concerning the appeal for readmission. The student may be required to provide written evidence to substantiate legitimate reasons for being absent.
7. If the student anticipates extensive absences, he/she must notify the Associate Dean of Student Affairs in writing immediately. A Student Success Team will then be convened to devise a strategy to enhance his or her likelihood of success.

STUDENTS WITH DISABILITIES:

Accessibility Statement: WCCC does not discriminate on the basis of disability in admission to, access to, or operation of its programs, services or activities. In accordance with Section 504 of the Rehabilitation Act of 1973 (CRF 34Part 104) and Title II of the Americans with Disabilities Act (ADA and the Amendments of Americans with Disabilities Acts (AADA) of 2008 &2010, WCCC is committed to assisting qualified students with disabilities achieve their individual goals. **Students with disabilities who need academic accommodations must contact the WCCC Accessibility & Administrative Specialist at 454-1093 or visit the specialist's office in TRIO.**

ACADEMIC ETHICS:

Honesty in all academic work is expected at WCCC. Any student who is suspected of academic dishonesty will face investigation and possible disciplinary action. Academic dishonesty includes, but is not limited to, using unauthorized aids; copying another person's work on exams, quizzes and assignments; and taking language, information or ideas from another person or source without noting the appropriate reference. Students guilty of academic misconduct, either directly or indirectly through participation or assistance, are immediately responsible to the class instructor. In addition to other possible disciplinary sanctions that may be imposed as a result of academic misconduct, the instructor has the authority to assign an F or zero for an activity, or to assign an F for the course. Additional possible disciplinary sanctions may include dismissal from the college.