

LABETTE COMMUNITY COLLEGE BRIEF SYLLABUS

SPECIAL NOTE:

This brief syllabus is not intended to be a legal contract. A full syllabus will be distributed to students at the first class session.

TEXT AND SUPPLEMENTARY MATERIALS USED IN THE COURSE (if any):

Please check with the LCC bookstore <http://www.labette.edu/bookstore> for the required texts for this class.

<u>COURSE NUMBER:</u>	COMP 195
<u>COURSE TITLE:</u>	FUNDAMENTALS OF NETWORK SECURITY
<u>SEMESTER CREDIT HOURS:</u>	3
<u>DEPARTMENT:</u>	Computer Science
<u>DIVISION:</u>	General Education
<u>PREREQUISITE:</u>	COMP 180 Network Admin I or Permission of instructor

COURSE DESCRIPTION:

This course provides the fundamentals of Network Security. Topics covered include: general Network Security, Communication Security, Infrastructure Security, and Basic Cryptography. Students will also learn the threats of Network Security and implement ways to stop intrusions.

COURSE OUTCOMES AND COMPETENCIES:

Students who successfully complete this course will be able to:

1. Apply network security, authentication, and recognize attacks, and malicious code.

- Understand security threats
- Create a secure network strategy
- Understand Kerberos
- Explain digital certificates
- Explain differences between viruses, worms, spoofing and other network attacks
- Discuss software exploration
- Setup a biometrics security station

2. Use remote access, secure email, file transfers, wireless and instant messaging

- Discuss how to secure a remote communication line
- Setup and secure email
- Use encrypting programs
- Explain the directory services
- Setup wireless security
- Troubleshoot using instant messaging
- Discuss WAP and WEP

3. Discuss network devices, transmission and storage media, network security topologies and intrusion detection.

- Discuss network devices and setup routers, firewalls and monitor a network.
- Explain the setup of multiple storage devices
- Explain and setup NAT, Tunneling and VLAN
- Discuss how to secure a remote communication line

4. Use remote access, secure E-mail, file transfers, wireless and instant messaging

- Discuss how to secure a remote communication line
- Demonstrate to steps in securing E-mail
- Explain the SSL/TLS protocols
- Discuss the different types of file transfer
- Explain the differences between WEP and WAP
- Setup and secure a wireless network

5. Setup and explain the uses of firewalls, routers, storage media and the types of security topologies

- Discuss how setup firewalls and routers
- Explain the different types of storage media
- Discuss the different types of security topologies
- Explain why a NAT is used
- Setup a VLAN
- Discuss the process of monitoring intrusions
- Explain the differences between OS/NOS
- Explain the different types of Cryptography
- Setup the physical environment for security
- Setup and execute a DRP
- Discuss computer forensics