Department:

Computer Support Technology

Course Description:

This course provides an introduction to computer networking administration and maintenance. The course will examine typical network hardware, network architectures, data transmission, and popular network technologies as well as how communication layers and their protocols are used on a network. The course will also cover troubleshooting network and security problems and ensuring the integrity and stability of a network.

Course Competencies:

Upon completion of the course, the student should be able to:

1. Identify the typical hardware components of a network
2. Identify and resolve network and computer attacks
3. Implement wireless security and encryption
4. Describe popular technologies used on networks today
5. Troubleshoot client logon problems
6. Explain how virus software works across the network
7. Describe the different levels of RAID technology
8. Implement password restrictions
9. Maintain a network by implementing a project plan of action

Course Content:

A. Ethical Hacking Overview
B. TCP/IP Concepts Review
C. Network and Computer Attacks
D. Footprinting and Social Engineering
E. Port Scanning
F. Enumeration
G. Programming for Security Professionals
H. Embedded Operating Systems
I. Linux Operating System Vulnerabilities
J. Hacking Web Servers
K. Hacking Wireless Networks
L. Cryptography
M. Protecting Networks with Security Devices
Learning Assessments:

Competencies will be assessed by assignments, case problems, quizzes, chapter tests, hands-on projects, lab assignments, a midterm test, and a final test. The tests may be in the objective or problem solving format.

Instructional Materials:

Hands on Ethical Hacking and Network Defense. ISBN: 1435486099

Guidelines for Requesting Accommodations Based on Documented Disability or Medical Condition

It is the intention of Highland Community College to work toward full compliance with the Americans with Disabilities Act, to make instructional programs accessible to all people, and to provide reasonable accommodations according to the law.

Students should understand that it is their responsibility to self-identify their need(s) for accommodation and that they must provide current, comprehensive diagnosis of a specific disability or medical condition from a qualified professional in order to receive services. Documentation must include specific recommendations for accommodation(s). Documentation should be provided in a timely manner prior to or early in the semester so that the requested accommodation can be considered and, if warranted, arranged.

On-Campus Students: At enrollment, any on campus student may complete a form that will allow them to self-identify any disability.

Off-Campus Regional Students: Self-identify your disability and accommodation needs with the Regional Coordinator and/or instructor, preferably prior to the first class meeting.

Online Students: Self-identify your disability and accommodation needs by contacting the Disabilities Coordinator. Students must provide their own programs to allow accessibility on their home computer.

Any student may also identify their disability by completing an online form located on the HCC homepage under Students Services/Resources/Disabilities. Questions should be directed to the Disabilities Coordinator.