Department:

Computer Support Technology

Course Description:

This course is designed as an introduction to computer networking. 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 introduce students to connecting PCs to the Internet and connecting PCs and shared peripherals to a Local Area Network (LAN).

Course Competencies:

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

1. Identify the seven layers of the OSI model and explain the functions of each layer
2. Define network architectures and describe popular architectures
3. Identify network devices and explain the purpose of each
4. Identify various communication media and cable connectors
5. Build, configure, and maintain a client server and peer-to-peer network
6. Identify and configure network standards and protocols

Course Content:

A. Introduction to Networks and Networking Concepts
B. Network Design Essentials
C. Networking Media
D. Network Interface Cards
E. Making Networks Work
F. Network Communications and Protocols
G. Network Architectures
H. Simple Network Operations
I. Understanding Complex Networks
J. Introduction to Network Security
K. Supporting a Small Business Network
L. Network Administration and Support
M. Enterprise and Wide Area Networks
N. Solving Network Problems
O. Common Networking Standards and Older Technologies
P. Planning and Implementing Networks
Q. Network Troubleshooting Guide
R. Networking Resources, Online and Offline

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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. Exams may be in the objective or problem solving format.

Instructional Materials:

ISBN: 9781111312527

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.