Department:

Computer Support Technology

Course Description:

This course will introduce the various networking concepts and technologies for students interested in becoming network administrators. Safety and proper tool usage will be reinforced. Key topics include protocols, topologies, hardware, client and server configuration, network services, and network security. In addition, the course will provide hands-on experience in configuration, troubleshooting, and maintenance of networks.

Course Competencies:

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

1. Define basic network concepts.
2. Identify and assemble network media and connectors.
3. Install and configure wireless networks and security.
4. Identify and explain networking protocols.
5. Identify and explain WAN transmission technologies.
7. Demonstrate proper troubleshooting and optimization of the network.

Course Content:

A. Introduction to Networking
B. Networking Standards and the OSI Model
C. Transmission Basics and Networking Media
D. Introduction to TCP/IP
E. Topologies and Ethernet Standards
F. Network Hardware
G. WANs and Remote Connectivity
H. Wireless Networking
I. Network Operating Systems
J. In-Depth TCP/IP Networking
K. Voice, Video, and Data Convergence
L. Network Security
M. Troubleshooting Network Problems
N. Ensuring Integrity and Availability
O. Network Management

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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:


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.

In order to begin the process all students must complete the “Disabilities Self-Identification Form” at this link: https://highlandcc.edu/pages/disability-services.

This form can also be accessed at the Highland Community College homepage under Students Services/Student Resources/Disability Service or by contacting the Disabilities Coordinator.