### **Course Description:**

Instruction in networking technologies and their implementation. Topics include the OSI reference model, network protocols, transmission media, and networking hardware and software.

Identify and use network transmission media; explain the OSI model; identify the characteristics of network topologies and protocols; identify the functions of a network operating system and distinguish between centralized, client/server, and peer-to-peer systems; and distinguish between Local Area Networks (LANs) and Wide Area Networks (WANs) and identify the components used to expand a LAN into a WAN.

Text, References and Supplies: Hands-On Networking Fundamentals, Palmer; 2nd ed. Cengage

#### **Learning Objectives:**

Upon successful completion of the course, students will have the ability to accomplish the following competencies accurately and efficiently:

Describe the evolution of data communication

List and describe various data communication protocols of importance

List and describe various networking standards

Describe alternative networking approaches and topologies

Describe the differences between data communication operations and data processing operations

Describe various important hardware devices used in networking

Understand the role of commercial communications companies in networking

Describe the tasks associated with network management

Describe the tasks associated with maintaining network security

Describe Wired and Wireless configurations and deployments

## Students may perform the following tasks in order to maintain safe lab and classroom spaces:

- Participate in shop and classroom maintenance which may include, but not limited to sweeping, mopping, disposing of trash, cleaning work benches, organize tools and equipment, organize tool room, disinfect classroom tables and chairs.
- Disassemble discontinued lab training vehicles or equipment for salvage.
- Repurpose lab vehicles to be utilized in lab assignments.
- Other course related tasks as assigned by instructor.

## **Student Contribution and Course Policies:**

Students are encouraged to contact the instructor at any time. If you need to meet with the instructor you will need to make an appoint to guarantee the instructor's availability at a specific time. Office hours will be posted in CANVAS.

Students will be expected to exhibit professional behavior in class. With regard to cell phone use, keep it on silence and do not take calls unless it is an emergency.

Students are expected to attend class, for online that means logging in and completing assignments.

**Late Work:** Assignments will be due on the date assigned. In the event an assignment must be submitted later than the scheduled due date the student must get instructor permission.

This is an online/hybrid class. You will be expected to keep up with the assignments posted in CANVAS. You must email the professor once a week with your progress.

#### **Policy Information:**

This will be an in-depth, fast-paced course. It is important that you complete the assignments before the due dates. Late work will not be accepted. There will be no exceptions to this policy.

Should you find that you are unable to complete the course, it is necessary for you to contact the Office of Student Services at Midland College and officially drop the class; otherwise a grade of "F" will be given for the semester grade.

## **<u>Class Policy</u>:**

It is each student's responsibility to become familiar with Midland College policies as explained in the Midland College Student Handbook. Cheating, plagiarism, and any other form of academic dishonesty will not be tolerated.

#### **Evaluation of Students:**

Lab Final Exams Chapter Exams		Total	45% 20% <u>35%</u> 100%
		Total	10070
90 and above	А		
80-89	В		
70-79	С		
60-69	D		
59 and below	F		

Course Schedule: This class meets for 3 lecture hours.

**SCANS Information**: SCANS skills are taught and/or reinforced in energy/petroleum courses. The student must locate, read, interpret and understand instruction information and direction materials. The participant must communicate thoughts, ideas and information through verbal and written mediums. Practical arithmetic and mathematics will apply continually throughout energy/petroleum training. Listening, interpreting, and responding to verbal communications and instructions as well as speaking in response to questioning will be a daily involvement. Thinking, reasoning, visualizing and problem solving are required assets to the energy/petroleum field. The student/participant must display responsibility, self-management and honesty.

#### **Administrative Information:**

Curt Pervier, Dean of Applied Technology

Lisa Hays, Division Secretary Office: Rm 143 TC Phone: (432) 685-4676 Fax: (432) 685-6472

Students should feel free to contact the instructor at any time. Appointments are encouraged for advising and planning the most appropriate or beneficial course work.

\*Syllabus subject to change as deemed necessary by the instructor to ensure learning objectives and course goals are met.

Midland College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following individual has been designated to handle inquiries regarding the non-discrimination policies:

#### Tana Baker

Title IX Coordinator/Compliance Officer 3600 N. Garfield, SSC 131 Midland, Texas 79705 (432) 685-4781 tbaker@midland.edu

For further information on notice of non-discrimination, visit the ED.gov Office of Civil Rights website, or call 1 (800) 421-3481.

#### .Americans with Disabilities Act (ADA) Statement:

Midland College provides services for students with disabilities through Student Services. In order to receive accommodations, students must visit <u>www.midland.edu/accommodation</u> and complete the Application for Accommodation Services located under the Apply for Accommodations tab. Services or accommodations are not automatic, each student must apply and be approved to receive them. All documentation submitted will be reviewed and a "Notice of Accommodations" letter will be sent to instructors outlining any reasonable accommodations.