Course Description: A course introducing the architecture, structure, functions, components, and models of the Internet. Describes the use of OSI and TCP layered models to examine the nature and roles of protocols and services at the applications, network, data link, and physical layers. Covers the principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations. Build simple LAN topologies by applying basic principles of cabling; perform basic configurations of network devices, including routers and switches; and implementing IP addressing schemes.

Student Learning Outcomes:

Upon course completion, the student will be able to:

Identifying the seven layers of the OSI model and describe the functions of each.

Describe the proper selection of network cable and devices.

Perform structured cable installation.

Install a local area network (LAN)

Configure network devices and nodes.

Define the five steps of data encapsulations

Identify the functions of the TCP/IP network layer protocols

Texas Skill Standards Learning Outcomes:

This course also includes Learning Outcomes which are key activities specified in skill standards developed by the National Workforce Center for Emerging Technologies and recognized by the Texas skill Standards Board. The complete skill standards can be found at:

https://www.tssb.org/

These outcomes are included in this syllabus and will be evaluated on major exams.

Network Design and Administration Skill Standards:
B3 Recommend selection of architecture, topology, hardware and software
B6 Specify wired and wireless facilities
B7 Integrate network components
C3 Perform workstation configuration and software loading
C5 Implement deployment
C7 Install hardware

**Required Textbooks and Materials**

**Lecture Book Title:** Online curriculum

Online requirements:

Midland College uses CANVAS for online instruction and communication with students. Students are expected to regularly check CANVAS. Check each week before class for important notices.

You can enter the URL: [midland.instructure.edu](http://midland.instructure.edu) to login into CANVAS.

**Logging in to Canvas**

**username**

**MC Students:** Midland College email address (example: jdoe123@mail.midland.edu)

IMPORTANT: MC Students enrolled BEFORE Winter Interim 2011, your email address follows the old format. Please see the Student Email page to determine your MC Email address.

**password**

MC Students: Midland College Student ID Number - no dashes (example: 123006789)

Additional Materials Required:

- 8 GB Flash Drive

**Policy Information:**

Students MUST actively participate by completing an academic assignment required by the instructor by the official census date. Students who do not actively participate in an academically-related activity will be reported as never attended and dropped from the course.

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.*
Grading and Methods of Evaluation:

Assignments/Labs 45%
Quizzes/Exams 35%
Final Exam 20%

Attendance: Class and Lab attendance is mandatory. The student is responsible for meeting assignment deadlines. Contact with the professor must be made each week. It is the student’s responsibility to keep up with the course. The professor cannot withdraw the student. If you cannot complete the course, drop the course before the due date as found on the midland.edu academic calendar webpage.

EXPECTED CLASSROOM ETIQUETTE:

Cell Phones and Pagers
Please extend courtesy to your classmates by turning off or silencing your cell phones and pagers. Cell phone conversations, instant messaging, and cell phone photography are prohibited during class and lab times.

Food and drinks are prohibited in the classrooms.

My office hours will be posted outside my office door each semester. I encourage you to email or call me to ask questions. You may also schedule an appointment at any time.

The content, schedule, administration, and management of this course are subject to change at any time. The instructor reserves the right to modify the schedule contained in this syllabus at any time.

Students with Disabilities:

Midland College provides services for students with disabilities through Student Services. In order to receive accommodations, students must place documentation on file with the Counselor/Disability Specialist. Students with disabilities should notify Midland College prior to the beginning of each semester. Student Services will provide each student with a letter outlining any reasonable accommodations. The student must present the letter to the instructor at the beginning of the semester.

Class Policy:
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.

Applied Technology Division

Contact Information

Division Dean: Curt Pervier
Department Chair: Heather Sanders
Division Secretary: Lisa Hays
Division Office: Room TC 143A
Division Telephone: (432)685-4676
Division Fax: (432)685-4672

Midland College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following individuals have been designated to handle inquiries regarding the non-discrimination policies: Tana Baker, Title IX Coordinator/Compliance Officer, 3600 N. Garfield, SSC 242, Midland, TX 79705, (432) 685-4781, tbaker@midland.edu; Natasha Morgan, Director Human Resources/Payroll, 3600 N. Garfield, PAD 104, Midland, TX 79705, (432) 685-4534, nmorgan@midland.edu. For further information on notice of non-discrimination, visit http://wdcrobcolp01.ed.gov/CFAPPS/OCR/contactus.cfm or call 1 (800) 421-3481.

Spanish

Midland College no discrimina por motivos de raza, color, nacionalidad, sexo, discapacidad, o edad en sus programas o actividades. Las siguientes personas han sido designadas para responder a cualquier pregunta o duda sobre estas políticas no discriminatorias: Tana Baker, Title IX Coordinator/Compliance Officer, 3600 N. Garfield, SSC 242, Midland, TX 79705, (432) 685-4781, tbaker@midland.edu; Natasha Morgan, Director Human Resources/Payroll, 3600 N. Garfield, PAD 104, Midland, TX 79705, (432) 685-4534, nmorgan@midland.edu. Para más información sobre estas políticas no discriminatorias, visite http://wdcrobcolp01.ed.gov/CFAPPS/OCR/contactus.cfm o llame al 1 (800) 421-3481.