



## Routers ITNW2312

“Northeast Texas Community College exists to provide responsible, exemplary learning opportunities.”

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Office Hours	Monday	Tuesday	Wednesday	Thursday	Friday
	4-5 PM	4-5 PM	4-5 PM	4-5 PM	By Appointment

*The information contained in this syllabus is subject to change without notice. Students are expected to be aware of any additional course policies presented by the instructor during the course.*

**Course Description:** Router configuration for local area networks and wide area networks. Includes Internet Protocol (IP) addressing techniques and intermediate routing protocols.

**Required Textbook(s):** The Illustrated Network – How TCP/IP Works in a Modern Network (1<sup>st</sup> Edition), author Walter Goralski

**Publisher:** Morgan Kaufman

**ISBN Number:** 978-0-12-374541-5

### Student Learning Outcomes:

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

- Install, configure, and manage switches, routers, and subnets
- Create and apply access control lists in TCP/IP and multi-protocol internetworks
- Configure variable-length subnet masking and intermediate routing protocols

### SCANS Skills:

- Acquire and evaluate information
- Organize and maintain information
- Interpret and communicate information
- Use computers to process information
- Participate as a member of a team: Contribute to group effort
- Monitor and correct performance: Distinguish trends, predict impact on system operations, diagnose system performance, and correct malfunctions
- Improve or Design Systems: Suggest modifications to existing systems and develop new or alternative systems to improve performance

- Select technology: Choose procedures, tools, or equipment, including computers and related technologies
- Apply technology to task: Understand overall intent and proper procedures for setup and operation of equipment
- Reading; Locate, understand, and interpret written information in prose and in documents such as manuals, graphs, and schedules
- Arithmetic: Perform basic computations; use basic numerical concepts such as whole numbers, etc
- Listening: Receive, attend to, interpret, and respond to verbal messages and other cues
- Problem Solving: Recognize problems and devise and implement plan of action
- Seeing Things in the Mind's Eye: Organize and process symbols, pictures, graphs, objects and other information
- Knowing how to learn: Use efficient learning techniques to acquire and apply new knowledge and skills
- Reasoning: Discover a rule or principle underlying the relationship between two or more objects and apply it
- Responsibility: Exert a high level of effort and persevere toward goal attainment
- Self-Esteem: Believe in own self-worth and maintain a positive view of self
- Social ability: Demonstrate understanding, friendliness, adaptability, empathy, and politeness in group settings
- Self-Management: Assess self accurately, sets personal goals, monitor progress, and exhibit self-control
- Integrity/Honesty: Choose ethical course of action

**Course Resources:**

Course materials, e.g., syllabus, PowerPoint slides, homework assignments, and tests, will be accessed through Blackboard.

**Course Schedule:**

All assignments and tests are available at the beginning of the semester and students may work ahead as desired. On the due dates listed below, the previous week's assignments and chapter test will close and be unavailable.

<b>Due Date .....</b>	<b>Chapter Assigned</b>
January 28 .....	Chapter 1: Protocol and Layers
February 4 .....	Chapter 2: TCP/IP Protocols and Devices
February 11 .....	Chapter 3: Network Link Technologies
February 18 .....	Chapter 4: IPv4 and IPv6 Addressing
February 25 .....	Chapter 5: Address Resolution Protocol
March 6 .....	Chapter 6: IPv4 and IPv6 Headers

March 11 .....	Chapter 7: Internet Control Message Protocol
March 25 .....	Chapter 8: Routing
April 1 .....	Chapter 9: Forwarding IP Packets
April 8 .....	Chapter 10: User Datagram Protocol
April 15 .....	Chapter 11: Transmission Control Protocol
April 22 .....	Chapter 12: Multiplexing and Sockets
April 29 .....	Chapter 13: Routing and Peering
May 6 .....	Chapter 14: IGPs: RIP, OSPF, and IS-IS
May 13 .....	Chapter 15: Border Gateway Protocol

**Homework Assignments:**

Homework assignments are assigned for each chapter. Assignments will be accessed and submitted within Blackboard. All homework assignment grades will be averaged and count 40% of course grade.

**Chapter Tests:**

There will be chapter tests posted in Blackboard for each chapter. The grades on these tests will be averaged and count 60% of your course grade. There will not be a comprehensive mid-term or final exam.

**Evaluation/Grading Policy:**

- Homework Assignments .....40%
- Chapter Review Tests .....60%

**NTCC Academic Honesty Statement:**

"Students are expected to complete course work in an honest manner, using their intellects and resources designated as allowable by the course instructor. Students are responsible for addressing questions about allowable resources with the course instructor. NTCC upholds the highest standards of academic integrity. This course will follow the NTCC Academic Honesty policy stated in the Student Handbook."

**Academic Ethics**

The college expects all students to engage in academic pursuits in a manner that is beyond reproach. Students are expected to maintain complete honesty and integrity in their academic pursuit. Academic dishonesty such as cheating, plagiarism, and collusion is unacceptable and may result in disciplinary action. Refer to the student handbook for more information on this subject.

**ADA Statement:**

It is the policy of NTCC to provide reasonable accommodations for qualified individuals who are students with disabilities. This College will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as

required to afford equal educational opportunity. It is the student's responsibility to arrange an appointment with a College counselor to obtain a Request for Accommodations form. For more information, please refer to the NTCC Catalog or Student Handbook.

**Family Educational Rights And Privacy Act (FERPA):**

The Family Educational Rights and Privacy Act (FERPA) is a federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. FERPA gives parents certain rights with respect to their children's educational records. These rights transfer to the student when he or she attends a school beyond the high school level. Students to whom the rights have transferred are considered "eligible students." In essence, a parent has no legal right to obtain information concerning the child's college records without the written consent of the student. In compliance with FERPA, information classified as "directory information" may be released to the general public without the written consent of the student unless the student makes a request in writing. Directory information is defined as: the student's name, permanent address and/or local address, telephone listing, dates of attendance, most recent previous education institution attended, other information including major, field of study, degrees, awards received, and participation in officially recognized activities/sports.