

Instructor: TBD
 Phone: TBD
 E-mail: TBD

TEXTBOOK AND SUPPLIES:

- Electronic Systems Technician, Level 3, 3rd Edition, ISBN-13: 9780132578233
- Electronic Systems Technician, Level 4, 4th Edition, ISBN-13: 9780136844150

PREREQUISITE: BICSI Technician Certification or instructor approval

OTHER REGISTRATION RESTRICTION(S): It is highly recommended that students be registered with DOL by their Sponsor (employer)

COURSE DESCRIPTION: In this course, students explore broadband and technologies used to transmit data and the methods used to distribute the signal. In addition, students are introduced to telecommunication infrastructure, switching systems, multiplexing technologies, voice, and data transmission services, the benefits of integrated systems and networks, and standard residential and commercial networks.

Upon successfully completing this course, students should be able to:

1. Identify internet protocol (IP) addresses of the devices on a network
2. Troubleshoot media access problems in a network
3. Design a basic network and set up a wireless network
4. Demonstrate PC configuration of IP and serial connections
5. Use specialized test equipment to troubleshoot electronic equipment, cables, and cabling systems
6. Set up and use selected cable testers to check out cables and evaluate the performance of copper and optical fiber cable
7. Design, set up, and test the performance of a broadband distribution system
8. Install a router or gateway and a fully operational phone

COURSEWORK:

- **Weekly Homework:** You are expected to come to class prepared with your weekly readings and assignments.
- **Pre-Post Assessments, Weekly Quizzes:** Take and submit online in Canvas.
 - A pre- and post-assessment will be taken on the first and last day of class to measure progress
 - Weekly quizzes will be taken online in Canvas. You are allowed two attempts with the higher score recorded.
- **Attendance/Participation:** Attendance is expected and crucial to understanding the material and participating in classroom activities. Attendance and participation will be recorded daily and included as part of your coursework grade. 95% attendance is required, which means you are allowed one excused absence.
- **Final Exam:** The final exam will be a comprehensive examination.
- **Lab Projects:** Completion of related lab projects will be required. Missed projects must be coordinated with the instructor and made up.

GRADES: Final grades will be calculated using the following scale and weights.

A	93% and above	C	73% – 78.9%
A-	90% – 92.9%	C-	70% – 72.9%
B+	87% – 89.9%	D+	67% – 69.9%
B	83% – 86.9%	D	63% – 66.9%
B-	80% – 82.9%	D-	60% – 62.9%
C+	77% – 79.9%	E	below 60%

Homework	20%
Pre-Post Assessments, Quizzes	20%
Final Exam	25%
Weekly Projects	25%
Attendance/participation/in-class work	10%

Schedule (Subject to change)

WEEK	DAY 1	DAY 2	ASSIGNMENTS
1	Testing Equipment	Testing Equipment 1. Use specialized test equipment to troubleshoot electronic equipment, cables, and cabling systems 2. Set up and use selected cable testers to check out cables and evaluate the performance of copper and optical fiber cable	TBD
2	Broadband 1. Broadband Basics 2. Broadband Delivery and Networks	Broadband 1. CATV Architecture, Headend, and Distribution Components 2. System Gains and Losses and Troubleshooting	TBD
3	Broadband 1. Design a broadband distribution system 2. Set up a broadband distribution system 3. Test the performance of a broadband distribution system 4. Troubleshoot media access problems in a network		TBD
4	Telecommunication Systems 1. History, Loops, and Switches 2. Telecommunication Exchange Switching Systems 3. Multiplexing	Telecommunication Systems 1. Other Voice and Data Transmission Services	TBD
5	Telecommunication Systems 1. Install a router or gateway 2. Install a fully operational phone		

WEEK	DAY 1	DAY 2	ASSIGNMENTS
6	Residential/Commercial Networks 1. Systems Integration 2. The OSI Reference Model 3. Subsystem Communication	Residential/Commercial Networks 1. User Interface and Systems Programming 2. Residential/Commercial Applications	TBD
7	Residential/Commercial Networks 1. Set up a wireless network		TBD
8	Catch-up day	<ul style="list-style-type: none"> • Wrap-up • Final 	TBD

WITHDRAWAL POLICY: The College's withdrawal schedule is followed. No withdrawals will be approved beyond the drop date.

COMMUNICATION and FEEDBACK EXPECTATIONS: Email is the best way to communicate with your instructor through the Canvas Inbox. You can expect to receive responses to emails within 24 business hours. In addition, you can expect that projects and exams will be graded and recorded within one week of when the assignment was submitted. Keep the line of communication open to avoid any misunderstandings.

ELECTRONIC DEVICES IN THE CLASSROOM: No video or audio recording in the classroom is allowed without written authorization from the instructor. Cell phones and other electronic devices should be silent and off the desk during class except to take notes if it is not distracting to classmates. In an emergency, exit the classroom to use your cell phones. Disruptive behavior will cause you to be excused from class and lose participation points. Please let your instructor know of any special circumstances at the start of the semester.

SAVE YOUR WORK: In case of human or computer errors, it is recommended that you save all coursework until you have received a final grade.