

# Telecommunications System Installer

## CSIR 1303.6A1 – Spring 2023



**LAMAR INSTITUTE  
OF TECHNOLOGY**

### **INSTRUCTOR CONTACT INFORMATION**

Instructor: Tim Storbeck  
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Office Phone: 409-247-5236  
Office Location: T4 Rm 109D  
Office Hours: Monday/Wednesday 7:00-8:00 am, 2:30-4:30 pm  
Tuesday/Thursday 7:00-8:00 am, 10:30 – 11:00 am, 1:30 – 4:30 pm  
Friday 7:00-8:00 am

### **CREDIT**

3 Semester Credit Hours (2 hours lecture, 4 hours lab)

### **MODE OF INSTRUCTION**

Face-to-face

### **PREREQUISITE/CO-REQUISITE:**

None

### **COURSE DESCRIPTION**

This course reviews fundamentals of telecommunications media, including terminology, rules and regulations, safety procedures, industry standards and protocols, installation, connectorization, maintenance, and troubleshooting. General principles of customer service within a technical environment are also studied. The competencies acquired are summarized in a comprehensive project covering network, telephone and coaxial wiring, fiber optics cables, satellite television systems, structural wiring, and "smart house" concepts.

### **COURSE OBJECTIVES**

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

- Read and interpret blueprints to determine wiring requirements
- Identify telecommunications system components
- Identify and describe industry standards and protocols
- Describe safety procedures
- Select proper tools
- Connectorize telecommunications media
- Install, maintain, and troubleshoot telecommunications media
- Discuss internal/external customer relationships
- Communicate technical information to customers in a clear, precise and logical manner
- Update customers on work progress to maintain customer satisfaction and public relations

## REQUIRED TEXTBOOK AND MATERIALS

- **CABLING** The complete guide to Copper and Fiber-Optic Networking
  - ISBN 978-1-118-80732-3
  - Computer with Internet Access

## ATTENDANCE POLICY

Attendance is mandatory. Students are expected to attend class regularly. Attendance counts for 10% of your grade.

## DROP POLICY

If you wish to drop a course, you are responsible for initiating and completing the drop process by the specified drop date as listed on the [Academic Calendar](#). If you stop coming to class and fail to drop the course, you will earn an “F” in the course.

## STUDENT EXPECTED TIME REQUIREMENT

For every hour in class (or unit of credit), students should expect to spend at least two to three hours per week studying and completing assignments. For a 3-credit-hour class, students should prepare to allocate approximately six to nine hours per week outside of class in a 16-week session OR approximately twelve to eighteen hours in an 8-week session. Online/Hybrid students should expect to spend at least as much time in this course as in the traditional, face-to-face class.

## COURSE CALENDAR

Week	Topic	Readings (Due on Week)	Assignments (Due on Week)
1	Course Introduction	Syllabus	Book at a glance
2	Part I LAN Network an Cabling Systems	Ch 1,2, &3	Learning Standards
3	Choosing the right cable	Ch 4 & 5	Labs Terminating cables
4	Tools of the Trade	Ch 6,7, &8	Labs working with the tools
5	Copper or Fiber	Ch 7 & 8	Labs Testing speed
6	Termination, Wall Plates and connectors	Ch 9 & 10	Labs installing plates and Connectors
7	Network Equipment	Ch 11	Labs installing racks and wire trays
8	Wireless Networks	Ch12	Labs building a mesh wireless network
9	Creating a request for proposal & Work experience from the field	Ch 13, 16, & 17	Labs Filling out paperwork correctly
10	History of Fiber Optics	Ch 18 & 19	Working w/ laser and LED

Week	Topic	Readings (Due on Week)	Assignments (Due on Week)
11	Principles of light	Ch 20	Working w/ Laser and LED
12	Types of Fiber cable	Ch 21,22, &23	Labs research availability of Fiber cable
13	Connectors and splicing Fiber	Ch 24 & 25	Labs Splicing and terminating
14	Fiber Multiplexer and Equipment	Ch 28, 29, & 30	Fiber optic detectors and Receivers.
15	Review	Finish any labs not finished	Last chance for Hands on Lab make up.
16	Final	Last chance to turn in late work	Final

### **COURSE EVALUATION**

Final grades will be calculated according to the following criteria:

- Chapter Quiz or Test                   40%
- Attendance                               10%
- Labs   30%
- Final Exam                               20%

### **GRADE SCALE**

- 90-100   A
- 80-89    B
- 70-79    C
- 60-69    D
- 0-59     F

LIT does not use +/- grading scales

### **ACADEMIC DISHONESTY**

Students found to be committing academic dishonesty (cheating, plagiarism, or collusion) may receive disciplinary action. Students need to familiarize themselves with the institution's [Academic Dishonesty Policy](#) available in the Student Catalog & Handbook, accessible on the LIT website.

### **TECHNICAL REQUIREMENTS**

The latest technical requirements, including hardware, compatible browsers, operating systems, etc. can be online at [Online Learning Requirements](#). A functional broadband internet connection, such as DSL, cable, or Wi-Fi is necessary to maximize the use of online technology and resources.

## **DISABILITIES STATEMENT**

The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. LIT provides reasonable accommodations as defined in the Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990, to students with a diagnosed disability. The Special Populations Office is located in the Eagles' Nest Room 129 and helps foster a supportive and inclusive educational environment by maintaining partnerships with faculty and staff, as well as promoting awareness among all members of the Lamar Institute of Technology community. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409)-951-5708 or email [specialpopulations@lit.edu](mailto:specialpopulations@lit.edu). You may also visit the online resource at [Special Populations - Lamar Institute of Technology \(lit.edu\)](#).

## **STUDENT CODE OF CONDUCT STATEMENT**

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at [www.lit.edu](http://www.lit.edu). Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

## **STARFISH**

LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.

## **ADDITIONAL COURSE POLICIES/INFORMATION**

- **Certification:** If a student passes the certification test that is associated with this class, you will receive an 'A' on the final exam and credit for 25% of your labs. If you have missed a previous test, you must still take the final exam to substitute for that grade.
- **Course Grade Requirement:** A grade of 'C' or better must be earned in this course for credit toward degree requirement.

## **CERTIFICATION REQUIREMENT**

Cyber Security and Networking majors are required to earn a certification in at least one of the following areas prior to graduation.

- A+ Certification
- Network+ Certification

- Security+ Certification
- Linux+ Certification
- Cisco Certified Network Associate (CCNA)