

[Industrial Controls for Maintenance]

Spring 2022 • 620-310-3ZBA • 2 credits

Meeting Dates and Time: Monday - Friday 12 pm to 4:45 pm

Start Date: 1/10/22 • **End Date:** 02/03/22

Instructional Delivery Method: Face to Face

Location: Racine Youth Offender Correctional Facility • Trailer

Instructor: JD Jones

E-Mail: jonesj@gtc.edu

Phone: 262-564-2767

Office: Trailer

Room: NA

Course Information

Course Description:

This course will cover electrical safety including lockout tagout, Ohm's law, use of a Multi-meter and oscilloscope. Along with reading, writing, building and troubleshooting ladder diagrams with relays, timers and counters. The concepts of relays, timers and counters will be covered, built and troubleshot.

Required Text And Course Materials:

E-Learning Amatrol only 1 code needed for all classes that require it for the semester.

Course Competencies:

1. Perform Lockout Tagout process
2. Analyze the characteristics of voltage.
3. Analyze the characteristics of current.
4. Analyze the characteristics of resistance.
5. Apply Ohm's law
6. Utilize multi-meter for voltage, current and resistance.
7. Utilize Oscilloscope to measure voltage both AC and DC.
8. Differentiate inputs and outputs on a ladder diagrams.
9. Perform applications of relays in a ladder diagram circuit.
10. Perform applications of different types of timers in a ladder diagram circuit.
11. Perform applications of counters in a ladder diagram circuit.
12. Troubleshoot errors in circuits.

Course Grading Policy:

An understanding of the grading guidelines is critical to the successful completion of this course. Please read carefully, and contact the instructor if you have any questions.

Final Grades: This class will have points assigned to each assignment, quiz, participation, test, labs and other activities. The final grade will be computed by taking the obtained points and dividing by the total possible points and turned into a percentage and referenced to the conversion scale to obtain the letter grade.

Grading Scale: The following grading scale is used in this class:

Grade	Percentage
A	90 – 100
B	80 - 89
C	75 - 79
D	65 - 74
F	< 65

Note: Students in the Electromechanical Maintenance Technician program must earn a "C" or higher in the class or retake it.

Key Dates:

1/10/22 1st class
1/20/22-1/26/22 INSTRUCTOR DROP DATE
3/4/22 Midterm grades
1/31/22 Last date for students to withdraw!
2/3/22 LAST CLASS