



Term: Spring 2019 (16-Week Course)

Course: MFGT-1404-443501

Course Dates: 01/22/19 – 05/16/19

Class Location: L106

Instructor:	James Blackstone
Phone:	469-264-3445
Email:	blckstn@att.net
Office & Office Hours:	Class By appointment only

Career Technologies Division:	T-Building: Room 143 972-860-7143
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Course Drop Date:	04/17/19
Disclaimer:	The instructor reserves the right to amend this syllabus as necessary.
Institutional Policies:	Eastfield College Institutional Policies (https://www.eastfieldcollege.edu/au/fastfacts/legal/pages/policies-for-syllabi.aspx)

Course objectives

The purpose of this course is to provide the student with a thorough knowledge of the theory and application of electricity in controlling typical industrial circuits as related to the following areas:

- A. Identify / electronic components
- B. Identify various circuits and their function
- C. Describe operation and applications of various common motor controls used in manufacturing

Students will be provided with the facilities, equipment, instruction, and assignments necessary to enable them to analyze, troubleshoot, and, in some cases, design circuits described.

Course outline

<i>Week</i>	<i>TOPIC</i>
1	Course Introduction, , Control panel devices
2	Lockout/Tagout, Control panel devices
3	Manual Starters
4	Contactors and Control Relays
5	Current Protection Devices
6	Circuit Layout & Specifications
7	Motor starters , two wire, three wire controls
8	Manual Reversing, Reversing starters
9	Multiple Push Buttons
10	Jogging Controls , Friction Brakes
11	Motor Starters, with jogging and reversing
12	Primary Resistor Starter
13	Soft starters
14	Time Relays
15	Plugging with time relays
16	Final Exam

The instructor reserves the right to alter content or sequence of presentation of course material as shown in the above tentative calendar in order to meet course objectives.

Textbooks and Other Course Materials:

TEXT: Lab-Volt 39163-00 Basic Controls

Printed course materials will be printed by the student on a daily basis. Manufacturer's publications will be used as the primary text material in most test equipment areas. Some internet site information will be utilized.

CALCULATOR: **TI-36X Solar** or equivalent scientific calculator

THREE_RING BINDER: Suggest obtaining a 3-Ring Binder (1 to 1 1/2")
to hold course materials.

Evaluation

Student evaluation will be based on completion of the assigned labs and class participation.

Completion of labs after instruction check out and release.

Full credit is given for all completed labs.

Unit tests will be completed during class periods. Make up required for all missed tests.

Grading scale

Student final grade will be based on an average of lab completion and Unit tests.

Labs will be 10 points

Unit tests will be 100 points

Attendance

Will be same as completed labs . It is important to make up any missed labs.