

## INFORMATION FOR STUDENTS

COURSE: Industrial Controls – ELEC 141

INSTRUCTOR: David Hartle (NN-120A), 386-7156, ([hartle@canton.edu](mailto:hartle@canton.edu))

OFFICE HOURS: I encourage office visits. I'm available "by chance" any time I'm in my office. I'm also available at any mutually agreeable time by appointment.

TEXTBOOK: Purchase the following from the college bookstore:

1. Programmable Logic Controllers: Hardware and Programming, 4<sup>th</sup> Edition, Max Rabiee, ISBN: 978-1-63126-932-5, Goodheart-Wilcox (2018)
2. Clear Plastic Safety Glasses.

READING ASSIGNMENTS: Reading assignments will be given in class. Your responsibility is to read the chapter(s) assignment and complete the questions at the end of the chapters and or units.

ATTENDANCE: Attendance is required. All absences must make up the lab. After two unexcused absences you'll be dropped from the lab. Excused absences are granted only for reasons listed in the Student Handbook. If you know in advance you'll be absent, attend another lab the same week to make up the work; this is easier for student and instructor.

LABORATORY SESSIONS: The schedule for these labs will be posted on the lab door and will be announced at the first meeting of each laboratory section. Lab sessions last 1 hour and 50 minutes. Attendance is required for the entire lab. Leaving early results in a grade penalty.

LABORATORY INSTRUCTIONS: Instructions for experiments are in the textbook you're required to buy and on the course web pages. You must study the diagrams before attending lab. Explanations in lab may make little sense if you haven't. Laboratory quizzes may be given at the instructor's discretion. **Be prepared!**

GRADING POLICY: Refer to page 4 in this document on Grading Standards, Negatives and "Make Ups." Note the "Sparks and Smoke" penalty and "Make Ups."

ELECTRIC SHOCK: Refer the "Electric Shock" document and "Lab safety and operations procedures" document on the course web pages. This is important since we will be using 208 volts.

SMOKING: NYS law prohibits smoking in college buildings, including the space between the outside doors. Using any form of tobacco is prohibited in lab.

INSTRUCTOR'S JUDGEMENT: The instructor may raise or lower your final grade by one or a partial letter grade based on the following:

- a. Your attitude toward the subject matter,
- b. Completion of all assignments on time,
- c. Punctuality,
- d. Participation and helpfulness in class,
- e. Open House set-ups, tour demonstrations, extra credit projects.

#### Grades/Grade Consultation:

You must keep a record of your grades (hour tests, quizzes, reports, etc.). I do not keep a “running average” record of your performance. See grading policy on how to calculate your average.

If you would like your instructor to go over your grade calculations;

1. Make an appointment with your instructor.
2. Bring your grade record to the meeting.

Any grade reduction penalties; missing: test, reports, attendance, etc. will be included in the review. Please note: missing a laboratory session, hour test, class notes, etc, is not an excuse. Getting up-to-date is your responsibility!! Do not expect your instructor to “track-you-down” to make sure you are current. You should know exactly how you are doing in the course.

The following activities will result in a 10% grade reduction (unless otherwise specified by your instructor). Do not take the following “too lightly”! Some previous students have resulted with D/D+’s grades for failure to comply; that otherwise would have been granted A/B+’s if they simply followed these guidelines:

1. Missing a laboratory/class session without prior approval or a legal excuse. All absences must be made-up.
2. Downloading any “game,” playing, work for another course, net-surfing during lecture or laboratory. Lack of participation in the project(s) for that session (sleeping, day-dreaming, just being here – and watching the other people do all the work, etc.). If you finish early; start on your homework, review/rewrite class notes, double check data circuits and be sure you understand the data acquired and what the laboratory project is all about. Write up the required conclusion at the end of each laboratory. Remember leaving early, without the instructor’s consent, will also require that you submit a written report for the following week. Your instructor will make a note of this, and expect a report. He will not remind you of this report due. It is your responsibility to fulfill this obligation. Be sure you have your textbook, class notes, laboratory hardware and reference material handy. Be sure you are prepared to use the laboratory wisely upon completion of data acquisition.
3. Failure to “log-out” or “log-in”; (1) your laboratory manual and (2) the instructor’s log book. All log entries must be neat, meaningful and readable.

3. Any other activities or behavior deemed inappropriate to the course, by the instructor.
- *In the case of class cancelation, alternate assignments may be given and will be communicated to students via email.*
  - *The faculty member has the right to change the syllabus at any time, including due dates, assignments, projects and tests. If the syllabus is changed, students will be notified of a change via email and the revised syllabus will be distributed via email.*

## ELEC 141 INDUSTRIAL CONTROLS

### GRADING STANDARD

Lab Practical Exam	100 Points/Practical
15 Minute Quizzes	20 Points/Quiz
Final Exam	100 Points
Reports	100 Points/Report

Final Grade = Total Accumulated Points/Total Possible Points x 100

### NEGATIVES:

Shorts, Sparks & Smoke - A reduction of 10% from the FINAL grade of all individuals in the lab group.

Missed Lab – 10% reduction from the FINAL grade

Late to Class – 3 late arrivals will result in a 10% reduction from the FINAL grade. Arriving late disrupts the instructor and the class.

If a lab or lab practical is missed, it can be made up if, in the instructor's judgment the student has a valid reason for being absent.

All "make ups" and lab practical retests must be done within a week of the original appointment day. No "make-ups" or retests during the final test week or after the last day of class.

Any "make-up" work is scheduled at the instructor's convenience. If you have a conflict, you will have to make arrangements with those concerned so to do the "make-up" at the scheduled time. Otherwise, you forfeit the opportunity for "make-up." Due to the instructor's "tight" schedule "make-up" time will be very difficult to set-up.

INDUSTRIAL CONTROLS  
LABORATORY TOPICAL OUTLINE

Topic  
Grading Standard

Electrical Shock

- |                |   |
|----------------|---|
| Exercise 1     | Introduction – Relays<br>And Contractors  |
| Exercise 2     | The Magnetic Across the Line Starter  |
| Exercise 3     | The Reversing Starter and Multiple<br>Push-Button Station                             |
| Exercise 4/5   | Introduction to the Programmable<br>Logic Controller (PLC)<br>Interfacing to starters |
| Exercise 6     | PLC Logic Functions and   |
| Exercise 7     | Time Delay Elements RTO/TON   |
| Exercise 9     | Counter Elements CTU/CTD  |
| Exercise 10/12 | Time Driven Sequencer   |
| Exercise 13/15 | SQO Sequencer   |
| Exercise 16-18 | Data Manipulation and Arithmetic Control  |

## SUPPLEMENTAL COURSE INFORMATION GRADING, ATTENDANCE, ETC.

- Extra Credit – The best answer to this request is: “Just do the assigned works”. If you take good notes; review and reorganize them so you know exactly what the various topics mean. Do the homework, read assigned chapters and re-work the example problems in the textbook and discussed in class. If you just take notes, set them aside, that plan is not going to work!! However, on occasion the instructor may offer extra credit for a void (only one!) of a 10% reduction. This is done on a first submit-received basis with students having special skills, in other areas of study. Some extra credit may be announced via e-mail. If you select an extra credit be sure you and your instructor agree on: due date, content, and penalty. These projects will require a fair investment of effort and time. Remember extra credit is not: “Give me something easy to do so I can get a good grade!”
- E-Mail: [hartle@canton.edu](mailto:hartle@canton.edu) this is the best communication medium to contact me. I do not use the email utility in Angel.
- Class/Laboratory Schedule: You are scheduled for a given time period(s) for this course. The time is to be devoted to this course only. Do not schedule any other activities during the time slot. This includes athletic commitments, “tests” for other courses, job interviews – than do not have prior approval.
- Job Interviews: If you have a group/individual interview, be sure to let me know. You are still responsible to get the missed material and make up the lost laboratory time.
- Credit hour (normal and overload): You will not receive any special treatment if you are taking a course overload. The same is expected of you as a person at a normal course load. I do not want to hear any complaining about the fact you have a lot of work to do for other courses. Talk to that respective instructor. Whether you are on a normal or overloaded schedule, and find the course requirements too demanding, you may want to seek tutoring or organize a study review session(s). Otherwise, you may want to consider dropping the course(s).
- Accommodated Services: If you are scheduled to receive extra time for tests, special reading, restricted activities, etc. You must see me immediately for a review of this service. In particular, you must make prior arrangements on taking tests. You will need to set up the extra time/place so it does not conflict with other commitments and your instructor’s schedule. It is your responsibility to keep in touch with your instructor on matters relating to this service. This periodic communication will enhance our (you and me) efforts to not only pass the course but make the learning experience more rewarding.