



ELMT 1301 – Programmable Logic Controllers (PLCs)

Fall 2016

Class: Tuesday 5pm-10pm

Instructor: James Lestrer

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Office: JBW #201

Hours: Tuesday 3pm-5pm, Thursday 3pm-5pm

Objective:

An introduction to programmable logic controllers as used in industrial environments including basic concepts, programming, applications, troubleshooting of ladder logic, and interfacing equipment.

Prerequisite/Corequisite: ELPT 1341

Credit: 3 (2 lecture, 3 lab)

Textbook:

Rehg, James A and Sartori, Glenn J. *Programmable Logic Controllers*
(Second Edition). Prentice Hall

Academic Dishonesty Prohibited:

“Academic dishonesty” means employing a method or technique or engaging in conduct in an academic endeavor that the student knows or should know is not permitted by the college system or a course instructor to fulfill academic requirements. Academic dishonesty includes, but is not limited to the following:

- Representing as one’s own work the work of another without acknowledging the source (plagiarism). This would include submitting substantially identical laboratory reports or other material in fulfillment of an assignment by two or more individuals, whether or not these used common date or other information, unless this has been specifically permitted by the instructor.
- A student’s failing to report to the instructor or department chair an incident, which the student believes to be a violation of the academic honesty policy.
- Any other conduct that a reasonable person in the same or similar circumstances would recognize as dishonest or improper in an academic setting.

Refer to the current College catalog and /or Student handbook for more information.

Students with Disabilities:

Any students with a documented disability who needs to arrange reasonable accommodations must contact the Disability Services Office at the respective college at the beginning of each semester. Faculty is authorized to provide only the accommodations requested by this office.

For questions, contact Donna Price at 713-718-5165. To visit the ADA web site, log on to www.hccs.edu, click Future Students, scroll down the page and click on the words Disability Information.

HCC is committed to provide a learning and working environment that is free from discrimination on the basis of sex which includes all forms of sexual misconduct. Title IX of the Education Amendments of 1972 requires that when a complaint is filed, a prompt and thorough investigation is initiated. Complaints may be filed with the HCC Title IX Coordinator available at 713 718-8271 or email at oie@hccs.edu.

Discrimination

Students should be aware that discrimination and/or other harassment based on race, sex, gender identity and gender expression, national origin, religion, age, disability, sexual orientation, color or veteran status is prohibited by HCC Policy G.1 Discrimination and Harassment and D.1.1 Equal Educational Opportunities. Any student who feels they have been discriminated against or harassed on the basis of race, sex, gender identity, gender expression, national origin, religion, age, disability, sexual orientation, color or veteran status including sexual harassment, has the opportunity to seek informal or formal resolution of the matter. All complaints/concerns should be directed to the Office of Institutional Equity, 713 718-8271 or oiie@hccs.edu. Additional information may be obtained online. Visit <http://www.hccs.edu/district/departments/institutionalequity/>

Complaints involving sexual misconduct to include but not limited to: sexual assault, stalking, dating violence, sexual harassment or domestic violence should be directed to the HCC Title IX Coordinator, Renée Mack at 713 718-8272 or renee.mack@hccs.edu

Student ID

Students are required to obtain a Student ID. For additional information, consult the *Student Handbook*.

Parking Rules and Regulations

Students are required to follow HCC's regulations regarding parking and permits. For additional information, visit <http://www.hccs.edu/hccs/about-hcc/police/parking/parking-rules-and-regulations>

Books, Tools and Supplies

Students are required to purchase and bring to class the required textbooks, tools, notebooks, supplies, and writing instruments as required by the instructor.

Dress Code

Dress code must be appropriate for the class. Students must dress in a way that clothing and accessories do not compromise their safety, and the safety of others. Proper foot wear is required in all laboratories. Absolutely no sandals or other footwear that exposes the feet will be allowed.

Classroom & Laboratory Conduct

Proper behavior is expected in all classes and laboratories. Foul language and horseplay are not allowed. Making or receiving cell phone calls during class are not allowed. Sleeping in class is not allowed.

Cell Phones

All cell phones must be turned off during class. Cell phone activity during class is deemed disruptive to the academic process and will not be tolerated. Class pictures/videos are not permitted.

Calculators

The student is responsible to bring his/her calculator. **Cell phones are not calculators**, and are not allowed to be used for that purpose during class, tests, or exams.

Withdrawals:

Refer to current College catalog or Student handbook for information on HCCS policies about dropping a course. It is the student's responsibility to officially withdraw from a class and prevent an "F" from appearing on his/her transcript.

Exams:

There will be two exams as part of the grading of this class. Exams will include material from the lectures as well as content from the book. *Students are responsible for all the material in the book whether or not it is discussed in class. No make-up exams will be given under any circumstances!*

Attendance:

Students are expected to attend classes regularly, and to be on time for every class period. Students can be dropped from a class due to excessive absences (3). Excessive tardiness and/or leaving before class completion will be considered absences. Attendance will be verified during the semester.

Grading Policy:

100-90 = A; 89-80 = B; 79-70 = C; 69-60 = D; less than 60 = F

Lab/Assignments 30%

Midterm Exam 35%

Final Exam 35%

The instructor reserves the right to make any changes in the syllabus if the circumstances require it.

Course Outline

Review the Syllabus	August 23
Chapter 1 – Intro. To PLC's	
Chapter 1	August 30
Chapter 2 – Input Devices and Output Actuators	September 6
Chapter 2	September 13
Chapter 3 – Introduction to PLC Programming	September 20
Chapter 3	September 27
Chapter 4 – Programming Timers	October 4
Chapter 4	October 11
Mid-Term (Chapters 1- 4)	October 18
Chapter 5 – Programming Counters	October 25
Chapter 5	November 1
Chapter 6 – Arithmetic & Move Instructions	November 8
Chapter 6	November 15
Chapter 7 – Conversion & Comparison Instructions	November 22
Chapter 7	November 29
Final Exam	TBA