

**ELMT 2333 — Industrial Electronics**  
**Frank Phillips College**

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**General Course Information**

Credit Hours: 3

**Prerequisite**

Consult Advisor

**Course Description**

A study of devices, circuits, and systems primarily used in automated manufacturing and/or process control including computer controls and interfacing between mechanical, electrical, electronic, and computer equipment. Includes presentation of programming schemes.

THECB Approval Number .....15.0403.0000

**End-of-Course Outcomes**

1. Describe how electronic input and output circuits are used to control automated manufacturing and/or process systems.
2. Identify basic elements used for input, output, timing, and control.
3. Define how programmable electronic systems use input data to alter output responses.
4. Troubleshoot a representative system
5. Demonstrate how system operation can be altered with software programming.

**Methods of Evaluation**

Students' successful completion of required projects and examinations as well as participation in classroom learning activities is the basis for assessing progress toward course objectives.

Category	Percentage	Grade Scale	
Quizzes	20%	<b>A</b>	<b>90-100%</b>
Lab Assignments	20%	<b>B</b>	<b>80-89%</b>
Final Lab Project	20%	<b>C</b>	<b>70-79%</b>
Attendance	20%	<b>D</b>	<b>60-69%</b>
Assignments / Participation	20%	<b>F</b>	<b>0-59%</b>
Total	100%		

In spite of the grading scale, the student's grade is subjective, meaning that the instructor can influence the student's final grade based on the student's performance, attendance, actions and preparation in class.

Please come to class on time. Call the instructor beforehand if you must miss class. Each student is responsible for all material covered in assigned readings and in each class. If you miss a test, it must be made up before the next two classes meet.

## **Academic Honesty and Integrity**

Students attending Frank Phillips College are expected to maintain high standards of personal and scholarly conduct. Academic dishonesty including, but not limited to, cheating, collusion (working with anyone else to produce work for which you take credit without the professor's permission), utilizing resources such as books and notes for a test without the professor's permission, and plagiarism is considered a serious offense and may result in disciplinary actions including:

- A grade of 0 for the test or assignment
- A semester grade of F for the course
- Administrative withdrawal from the course
- Academic suspension
- Notation of the student's transcript of "Academic Dishonesty."
- \*\*\*Faculty members have the right to assign a failing grade to a student who is guilty of academic dishonesty at any point during a semester. Faculty members may prohibit a student from dropping a course when academic dishonesty is discovered. However, if a student has dropped the course in accordance with the rules and dates applied to dropping a course and prior to the discovery of academic dishonesty, the grade of W will stand. Students currently enrolled in a course and students who have completed a course (A, B, C, D, CT, and I) may have a grade changed to an F if academic dishonesty is discovered. The faculty member must notify the student of the change to the final grade within one week of facilitating the change. The student will have the opportunity to appeal the final grade change according to the college policy stated in the catalog.

## **Class Attendance\***

Regular attendance is necessary for satisfactory achievement. Therefore, it is the responsibility of the student to attend class in accordance with requirements of the course as established by the instructor.

Students will be excused from class without penalty when either representing the college in an approved activity or having an approved reason for not attending. Reasons for absences must be approved by the instructor of the course. These exceptions do not relieve the student of the responsibility of making up the missed work as designated by the instructor concerned.

**Students who enroll in one or more college-preparatory course(s) because of TSI deficiency will be administratively withdrawn from all classes if the course in which they are excessively absent is their only preparatory course.** For a student enrolled in more than one preparatory course, the student may be dropped from only the course affected by absences.

\*See each instructor's classroom behavior and attendance policy.

**\*Classroom Policy and Instructor Expectations:** Please come to class on time; If you can **NOT** attend class, please call FPC at 457-4200 ext. 194 or 186. Failure to call if you can **NOT** attend class will result in an unexcused absence and may affect your grade. Each student will be responsible for all materials covered in class discussions and handouts. When you do receive handouts, it will be necessary for you to keep them in such a manner as to provide

comprehensive reference for you to use throughout the duration of the class. If you miss a quiz, you will be required to make it up before the next two classes meet. In the case of the final week, you will have only one session to make up any work not completed. If you have a cell phone, please turn it off or put it on VIBRATE during class. If you must take a call, please excuse yourself and take it in the hall.

**\*Attendance Requirements:** Two absences will be allowed without affecting your grade.

Any student who is absent from classes for the observance of a religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day, provided that proper notification of the absence is given to the instructor of the course missed. The student should notify the instructor within the first fifteen (15) days of the semester that he or she intends to be absent on the specified holy day.

### **Cell Phones and Other Electronic Devices Procedure:**

Cell phones and electronic devices in the classroom create a distraction for both students and faculty. Cell phones are also considered suspicious during test taking. Therefore, Frank Phillips College outlines the procedure for handling cell phone usage in a classroom as follows:

1. First Offense: the student will be warned verbally by the instructor to turn off the cell phone or electronic device or by appropriate administrative personnel at distance sites. The instructor will make a notation of the infraction.
2. Second Offense: the student will be asked to leave the class period for the day and will receive zeroes for any work done in class on that day; a student receiving instruction through remote connection at an off-campus site will be required to attend the class face to face in Borger from this class date forward.
3. Third Offense: the student will be administratively withdrawn from the class in which the infraction occurred and will receive no refund for the class.

Students should leave the college's main number with an appropriate contact in case of an emergency.

Borger: (806) 457-4200, ext. 0 or 886-5047 after hours

Dalhart: (806) 244-7669

Perryton: (806) 648-1450

### **Grievance Policy**

If you have a dispute concerning your grade or policies in this class, it is your responsibility to FIRST contact the instructor, either by e-mail or in person, to discuss the matter. Should things remain unresolved after this initial contact, please follow the procedures described in the Academic Policies section of the Frank Phillips College Catalog. In the vast majority of cases, the matter can be resolved at the instructor/student level, and learning to communicate your concerns in a civilized manner is part of the college experience.

### **Important Information**

Frank Phillips College is a Microsoft Office Campus. You must submit your electronic assignments in Microsoft Office programs only. If you do not have Microsoft Office, you may use one of the computer lab sites on campus for your class work.

## Scans/Or Core Competencies That Will Be Addressed in the Class

### **Resources:**

Allocates Time  
Allocates Money  
Allocates Material & Facility Resources

### **Interpersonal:**

Participates as a Member of a Team  
Teaches Others  
Serves Clients/Customers  
Exercises Leadership  
Negotiates to Arrive at a Decision  
Works with Cultural Diversity

### **Technology:**

Selects Technology  
Applies Technology  
Maintains & Troubleshoots Technology

### **Basic Skills:**

Reading  
Writing  
Arithmetic  
Mathematics  
Listening & Speaking

### **Information:**

Acquires & Evaluates Information  
Organizes & Maintains Information  
Uses Computers to Process Information

### **Thinking Skills:**

Creative Thinking  
Decision Making  
Problem Solving  
Seeing Things in the Mind's Eye  
Knowing How to Learn  
Reasoning

### **Systems:**

Understands Systems  
Monitors & Corrects Performance  
Improves & Designs Systems

### **Personal Qualities:**

Responsibility  
Self-Esteem  
Sociability  
Self-Management  
Integrity/Honesty