



**Division of Construction Engineering Technology, HVAC, Industrial Electrical  
Construction Industry Department**

[https://www.hccs.edu/programs/areas-of-study/construction-industry--  
manufacturing/](https://www.hccs.edu/programs/areas-of-study/construction-industry--manufacturing/)

**ELPT 1315: Electrical Calculations | CRN #22758**

Fall 2020 | 8 Weeks | Online Anytime | 3 Credit Hours |

**Instructor Contact Information**

Instructor:	Heriberto Frías	Office Phone:	(713) 718-6549
Office:	J.B. Whitely, Room 201	Office Hours:	See Canvas virtual office hours
HCC Email:	<a href="mailto:h.friasrangel@hccs.edu">h.friasrangel@hccs.edu</a>	Office Location:	Central Faculty Area

Please feel free to contact me concerning any problems that you are experiencing in this course. Your performance in my class is very important to me. I am available to hear your concerns and just to discuss course topics.

**Instructor's Preferred Method of Contact**

I will respond to emails within 24 hours Monday through Friday; I will reply to weekend messages on Monday mornings.

**What's Exciting About This Course**

One of the most exciting aspects of learning industrial wiring is how a electrical controls. From there, my fascination on how everything is controlled using electricity from turning on lights to controlling motors.

**My Personal Welcome**

Welcome to Electrical Calculations I - ELPT 1315 - CRN 22758. My name is Heriberto Frías and I am excited about being your instructor this semester. I am thankful for the opportunity to help you remember the necessary mathematical skills that you will need in your electrical training. I aim to provide you with meaningful activities that will allow you to apply the concepts that you need to master. This is not a difficult class, but you must still do all the work and study. I realize that for some of you, it has been a while since you last studied mathematics, but I promise you I am available to support you. The fastest way to reach me is by my HCC email. The best way to really discuss issues is in person and I'm available during my virtual office hours posted on Canvas > Cisco WebEx > Office Hours to tackle any questions you might have. Do not hesitate to contact me whenever you have a question.

## Prerequisites and/or Co-Requisites

ELPT 1315 requires college-level reading and writing skills. Other than that, you should just have a willingness to learn and explore your environment. Please carefully read and consider the repeater policy in the [HCCS Student Handbook](#).

## Eagle Online Canvas Learning Management System

This section of ELPT 1321 will use [Eagle Online Canvas \(https://eagleonline.hccs.edu\)](https://eagleonline.hccs.edu) to supplement in-class assignments, exams, and activities. Namely, you will be taking all quizzes online, but your exams will be in class. The other aspect of Canvas this semester will be for your tool talks and explanations of tools to help you purchase and use tools effectively and correctly. HCCS Open Lab locations may be used to access the Internet and Eagle Online Canvas. It is recommended that you **use Firefox or Chrome as your browser**.

## HCC Online Information and Policies

Here is the link to information about HCC Online classes including the required Online Orientation for all fully online classes: <http://www.hccs.edu/online/>

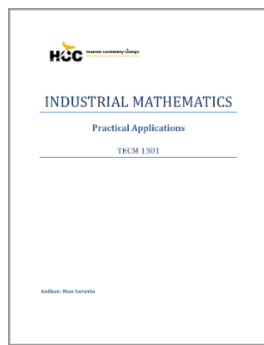
## Scoring Rubrics, Sample Assignments, etc.

Look in Eagle Online Canvas for the scoring rubrics for assignments, samples of class assignments, and other information to assist you in the course.

<https://eagleonline.hccs.edu/login/ldap>

## Instructional Materials

### Textbook Information



The textbook listed below is **REQUIRED** for this course.

***"Industrial Mathematics" Practical Applications TECM 1301***

by Max Saravia

ISBN: HCC Book store only

It is for sale at the [HCC Bookstore](#). Order your book here: [HCC Bookstore](#)

## Other Instructional Resources

### Tutoring

HCC provides free, confidential, and convenient academic support, including writing critiques, to HCC students in an online environment and on campus. Tutoring is provided by HCC personnel in order to ensure that it is contextual and appropriate. Visit the [HCC Tutoring Services](#) website for services provided.

### Libraries

The HCC Library System consists of 9 libraries and 6 Electronic Resource Centers (ERCs) that are inviting places to study and collaborate on projects. Librarians are available both at the

libraries and online to show you how to locate and use the resources you need. The libraries maintain a large selection of electronic resources as well as collections of books, magazines, newspapers, and audiovisual materials. The portal to all libraries' resources and services is the HCCS library web page at <http://library.hccs.edu>.

### **Supplementary Instruction**

Supplemental Instruction is an academic enrichment and support program that uses peer-assisted study sessions to improve student retention and success in historically difficult courses. Peer Support is provided by students who have already succeeded in completion of the specified course, and who earned a grade of A or B. Find details at <http://www.hccs.edu/resources-for/current-students/supplemental-instruction/>.

## Course Overview

ELPT 1315 is an introduction to mathematical applications utilized to solve problems in the electrical field. Topics include fractions, decimals, percentages, simple equations, ratio and proportion, unit conversions, and applied geometry.

### Core Curriculum Objectives (CCOs)

ELPT 1315 is a building block class in your journey towards an qualified, skilled trade worker, and this course should address the following core objectives:

- **Safety Above All:** We must be safe when we are working our math problems so no one gets hurt
- **Communication Skills:** Students will demonstrate effective communication through visual, written, and spoken to develop themselves in the area of mathematics
- **Critical Thinking:** Students will demonstrate critical thinking skills in evaluating a problem to come up with the right solution to a particular math problem

### Program Student Learning Outcomes (PSLOs)

Can be found at:

<https://www.hccs.edu/programs/areas-of-study/construction-industry--manufacturing/industrial-electricity/>

### Course Student Learning Outcomes (CSLOs)

Upon completion of ELPT 1321, the student will be able to:

1. Utilize a calculator to perform operations involving fractions and decimals
2. Compute percentages utilizing ratio and proportions
3. Convert unit values
4. Solve simple equations
5. Calculate areas and volumes of geometric solids

## Course Requirements

- This class is [Online Anytime](#).
- Online sessions will be done from computer including exams and discussions.
- Activities will consist of videos, laboratory exercises, and spreadsheets.

## Student Success

Expect to spend at least twice as many hours per week outside of class as you do in class studying the course content. Additional time will be required for written assignments. The assignments provided will help you use your study hours wisely. Successful completion of this course requires a combination of the following:

- Reading the textbook
- Attending class in person and/or online
- Completing assignments
- Participating in class activities

There is no short cut for success in this course; it requires reading (and probably re-reading) and studying the material using the course objectives as your guide.

## Instructor and Student Responsibilities

### As your Instructor, it is my responsibility to:

- Provide the grading scale and detailed grading formula explaining how student grades are to be derived
- Facilitate an effective learning environment through learner-centered instructional techniques
- Provide a description of any special projects or assignments
- Inform students of policies such as attendance, withdrawal, tardiness, and make up
- Provide the course outline and class calendar which will include a description of any special projects or assignments
- Arrange to meet with individual students before and after class as required

### As a student, it is your responsibility to:

- Attend class in person and/or online
- Participate actively by reviewing course material, interacting with classmates, and responding promptly in your communication with me
- Read and comprehend the textbook
- Complete the required assignments and exams
- Ask for help when there is a question or problem
- Keep copies of all paperwork, including this syllabus, handouts, and all assignments
- Attain a raw score of at least 50% on the departmental final exam
- Be aware of and comply with academic honesty policies in the HCCS Student Handbook

## Assignments, Exams, and Activities

### Participation

In my mathematics class, you will earn participation points for online discussion entries. This is a great way for you and your other class mates to learn from other people and how they approach various math problems. Even if you get a problem wrong, I will still give you points for the attempt. If you don't try, you can't get any better, and you will get better, I promise. In addition, you will have some problems to work in your canvas class.

### End of Chapter Reviews

At the end of each chapter, there will be review questions for the chapter that we just finished. It is your responsibility to do these review quizzes. They are the same one from the book, and they aren't more than 20 questions. They are also a review of what we covered in that chapter. One last thing is each time we cover a subject matter, you will have no more than 1 complete week to finish the tasks that we go over from that day. If you haven't finished or started the work, you will receive a zero on any and all uncomplete work. No exceptions.

### Midterm & Final Exam

Each student is responsible for taking and passing a midterm and final exam. Both of these exam will consist of knowledge learned from in class lectures, readings in the textbook, online participation, and working math problems.

## Grading Formula

In class and Canvas participation are each worth 15% of your grade. End of chapter reviews are worth 10% of your grade. Each exam is worth 30% of your grade.

In class participation	15%
Canvas participation	15%
End of Chapter Quizzes	10%
Midterm Exam	30%
Final Exam	30%
Total for class	100%

Grade	Total Points
A	90+
B	80-89
C	70-79
D	60-69
F	<60

**HCC Grading Scale can be found on this site under Academic Information:**  
<http://www.hccs.edu/resources-for/current-students/student-handbook/>

## Course Calendar

Week	Dates	Topic/What's due
1	Oct 19-23	Introduction Chapter 1: Basic Mathematical Concepts
2	Oct 26-30	Chapter 2: Whole Numbers and Operations
3	Nov 2-6	Chapter 3: Fractions
4	Nov 9-13	Midterm Exam (covering chapters 1-3) Chapter 4: Decimals
5	Nov 16-20	Chapter 5: Percentage
6	Nov 23-25	Chapter 6: Exponents and Scientific Notation
7	Nov 30- Dec 4	Chapter 7: Unit Conversion and Metric System
8	Dec 7-11	Final Exam.

### Syllabus Modifications

The instructor reserves the right to modify the syllabus at any time during the semester and will promptly notify students in writing, typically by e-mail, of any such changes.

## Instructor's Practices and Procedures

### Missed Assignments

There will be no make up for missed assignments. I am allowing you a reasonable amount of time to get all labs and assignments done. Also, there will be no makeup exam so make sure

to not miss exam days. Any missed assignment or exam will earn a grade of "0" on that particular exercise. One quiz with the lowest score will be removed from grading. (Not including final exam)

### Academic Integrity

Students are responsible for conducting themselves with integrity in fulfilling course requirements. Penalties and/or disciplinary proceedings may be initiated by college district officials against a student accused of scholastic dishonesty. "Scholastic Dishonesty" includes, but is not limited to, cheating on a test, plagiarism and collusion. Any instance of scholastic dishonesty may be reported to the Maxiant system. Possible punishments for scholastic dishonesty include a grade of "0" or "F" on the particular assignment, failure in the course, and/or recommendation for probation or dismissal from the college district. A recommendation for suspension or expulsion will be referred to the college Dean of Students for disciplinary disposition. Students have the right to appeal the decision. Cheating, plagiarism, collusion, etc. will result in a grade of F for the course and a report will be filed with the Dean.

Here's the link to the HCC information about academic integrity (Scholastic Dishonesty and Violation of Academic Scholastic Dishonesty and Grievance):

<http://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-procedures/>

### Attendance Procedures

You are encouraged to attend each class since regular attendance correlates with good grades. Be on time and attend the entire class. If you must be absent, you are, of course, responsible for the material covered in class in your absence (see the Course Calendar). Be advised that instructors must drop students who fail to attend class by the official date of enrollment ("Census Day"). In addition, instructors may drop students who miss four hours or 12.5% of class time.

### Student Conduct

I expect students to conduct themselves professionally in their communications with me, classmates, and college staff and administration, whether in email or in class. Behavior inappropriate to the collegiate setting (including but not limited to abusive/derogatory/threatening/harassing language directed at the instructor or towards other students, staff or administrators) will not be tolerated and may result in removal from the course if severe and/or repeated. **To ensure privacy of your classmates, taking photos in class is strictly prohibited.**

## Industrial Electrical Program Information

### New Associates Degree in Electrical Technology Fall 2019

Please look forward to our upcoming Associate's degree in Electrical Technology which opens Fall 2019.

### Scholarship information for Workforce Students

Extra money is always welcomed while you are in school. Below are the scholarship that I know about that you should apply for if you meet the criteria for that scholarship.

- HCC Foundation Workforce Scholarship - \$1,000 award  
<https://www.hccsfoundation.org/workforceschlp>

- Mike Rowe's Scholarship (You can also look for jobs on his website).  
<https://www.mikeroweworks.org/>
- TEXVET.ORG – Various Veterans Scholarships for Texas Veterans\_  
[https://www.texvet.org/scholarships?distance%5Bpostal\\_code%5D=77004&distance%5Bsearch\\_distance%5D=50&distance%5Bsearch\\_units%5D=mile](https://www.texvet.org/scholarships?distance%5Bpostal_code%5D=77004&distance%5Bsearch_distance%5D=50&distance%5Bsearch_units%5D=mile)
- Home Depot School Scholarship - \$2,500 and deadline to apply is 01/22/2019  
<https://www.thdhomerfund.org/orangescholars/>
- Grainger Tool for Tomorrow Scholarship - \$2,000 and a bag full of tools.  
<https://www.grainger.com/images/TFT-Brochure.pdf>

## HCC Policies

Here's the link to the HCC Student Handbook <http://www.hccs.edu/resources-for/current-students/student-handbook/> In it you will find information about the following:

Academic Information	Incomplete Grades
Academic Support	International Student Services
Attendance, Repeating Courses, and Withdrawal	Health Awareness
Career Planning and Job Search	Libraries/Bookstore
Childcare	Police Services & Campus Safety
disAbility Support Services	Student Life at HCC
Electronic Devices	Student Rights and Responsibilities
Equal Educational Opportunity	Student Services
Financial Aid TV (FATV)	Testing
General Student Complaints	Transfer Planning
Grade of FX	Veteran Services



**EGLS<sup>3</sup>**

The EGLS<sup>3</sup> ([Evaluation for Greater Learning Student Survey System](#)) will be available for most courses near the end of the term until finals start. This brief survey will give invaluable information to your faculty about their teaching. Results are anonymous and will be available to faculty and division chairs after the end of the term. EGLS<sup>3</sup> surveys are only available for the Fall and Spring semesters. EGLS<sup>3</sup> surveys are not offered during the Summer semester due to logistical constraints.

<http://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/>

**Campus Carry Link**

Here's the link to the HCC information about Campus Carry:

<http://www.hccs.edu/departments/police/campus-carry/>

**HCC Email Policy**

When communicating via email, HCC requires students to communicate only through the HCC email system to protect your privacy. If you have not activated your HCC student email account, you can go [to HCC Eagle ID](#) and activate it now. You may also use Canvas Inbox to communicate.

**Housing and Food Assistance for Students**

Any student who faces challenges securing their foods or housing and believes this may affect their performance in the course is urged to contact the Dean of Students at their college for support. Furthermore, please notify the professor if you are comfortable in doing so.

This will enable HCC to provide any resources that HCC may possess.

**Office of Institutional Equity**

Use the link below to access the HCC Office of Institutional Equity, Inclusion, and Engagement (<http://www.hccs.edu/departments/institutional-equity/>)

**disAbility Services**

HCC strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please meet with a campus Abilities Counselor as soon as possible in order to establish reasonable accommodations. Reasonable accommodations are established through an interactive process between you, your instructor(s) and Ability Services. It is the policy and practice of HCC to create inclusive and accessible learning environments consistent with federal and state law. For more information, please go to <http://www.hccs.edu/support-services/disability-services/>

**Title IX**

Houston Community College is committed to cultivating an environment free from inappropriate conduct of a sexual or gender-based nature including sex discrimination, sexual assault, sexual harassment, and sexual violence. Sex discrimination includes all forms of sexual and gender-based misconduct and violates an individual's fundamental rights and personal dignity. Title IX prohibits discrimination on the basis of sex-including pregnancy and parental status in educational programs and activities. If you require an accommodation due to pregnancy please contact an Abilities Services Counselor. The Director of EEO/Compliance

is designated as the Title IX Coordinator and Section 504 Coordinator. All inquiries concerning HCC policies, compliance with applicable laws, statutes, and regulations (such as Title VI, Title IX, and Section 504), and complaints may be directed to:

David Cross  
Director EEO/Compliance  
Office of Institutional Equity & Diversity  
3100 Main  
(713) 718-8271  
Houston, TX 77266-7517 or [Institutional.Equity@hccs.edu](mailto:Institutional.Equity@hccs.edu)  
<http://www.hccs.edu/departments/institutional-equity/title-ix-know-your-rights/>

### **Office of the Dean of Students**

Contact the office of the Dean of Students to seek assistance in determining the correct complaint procedure to follow or to identify the appropriate academic dean or supervisor for informal resolution of complaints.

<https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-complaints/speak-with-the-dean-of-students/>

### **Interim Department Chair Contact Information**

Aurelio Jesus Aguilar Interim Department Chair  
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