**Electricity MFGT 23**

**Reedley College**

**Spring 2016**

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| Larry Paredes Sr. | January 11 – March 11, 2016 Fridays |
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**Text:**

Information essential for this course will be presented via whiteboard/PowerPoint during lecture. Recommended textbook: *Electrical Motor Controls for Integrated Systems* 5th edition ISBN: 978-0-8269-1226-8 Handouts provided are to be read and treated as the course “text.” and kept with your notes.

**Required Materials:**

Pen, pencils, paper, ringed binder, and a notebook. Calculators (**not** the ones on your phones) will be necessary.

**Course Description:**

The study of basic energy sources developed for commercial / manufacturing use. Methods that are used to measure potential difference and power, residential and industrial safety. Basic electrical codes, wire, and industrial troubleshooting. Basic shop electrical repairs and installations.

**Course Outcomes:**

In an applied setting and upon successful completion of this course, the student will be able to:

* Integrate electric knowledge into a positive work environment.
* Service and operate electrical systems using safe shop techniques
* Calculate common mathematical problems associated with electrical systems.
* Choose appropriate materials for any assigned project.
* Assess electrical problems and choose an appropriate course of action.

**Other Course Objectives:**

Upon successful completion of this course, the student will:

* Identify the basic components of an electrical system.
* Apply electrical principles to operating electrical systems.
* Compute mathematical formulas and understand basic physics principles that apply to electric circuits systems.
* Practice proper maintenance and repair of electric circuits.
* Learn safety precautions as needed in electrical work.

**Class Room Expectation:**

In order to encourage participation and growth, students are expected to be respectful of each others’ time and needs by not monopolizing class time.  Questions unrelated to the subject at hand will be reserved for after class.

Attendance is mandatory. Three (3) tardies (more than 10 minutes late without prior notification) will turn into an absence. You are allowed only two (2) absences in this class, after which you will be dropped. You must be present on the day of quizzes. The only exception will be if the instructor is notified in the case of an emergency (such as a death in the family, health emergency, car accident, etc.), by work phone or e-mail. Student will need to bring in proof of excused absence to make up an exam. It is the student’s responsibility to communicate with the instructor for a mutually agreed upon time to make-up an exam. If no contact is made by the student regarding make up exams and assignments a “0” will be recorded for each incomplete assignment.

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| **Lecture/Assignments** | **Due Dates** | | **Points** |
| **Electrical Safety**  Lab #1 - HW Handouts | Week 1 Friday | 1/15/16 | 30 |
| **Tools & Meters**  Lab #2 - HW Handouts | Week 2 Friday | 1/22/16 | 30 |
| **Electrical Quantities/Series Circuits**  Lab #3 - HW Handouts/ Quiz #1 | Week 3 Friday | 1/29/16 | 70 |
| **Parallel/Combination Circuits**  Lab #4 - HW Handouts | Week 4 Friday | 2/5/16 | 30 |
| **Presidents Day (NO CLASS)** | Week 5 Friday | 2/12/16 |  |
| **AC/DC Characteristics**  Lab #5 Ch.- HW Handouts  Quiz #2 | Week 6 Friday | 2/19/16 | 80 |
| **Solenoids/Relays**  Lab #6 - HW Handouts | Week 7 Friday | 2/26/16 | 30 |
| **Transformers/Basic Motors**  Lab #7 – HW Handouts | Week 8 Friday | 3/4/16 | 30 |
| **Final Examination** | Week 9 Friday | 3/11/16 | 100 |
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|  | **Total Points =** | | **400** |

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| Grading Scale  Grading criteria for this class is as follows: | | | Grading by Weight | |
|  | 400 – 360 points | = A (100-90%) | Lab/Classwork | 50 % |
|  | 359 – 320 points | = B (89-80%) | Quizzes | 25 % |
|  | 319 – 280 points | = C (79-70%) | Final | 25 % |
|  | 279 – 240 points | = D (69-60%) | Total | 100% |
|  | 239 points or less | = F (<60%) |  |  |

**College Policies**

**Cheating and Plagiarism:** "Cheating is the actual or attempted practice of fraudulent or deceptive acts for the purpose of improving one's grade or obtaining course credit; such acts also include assisting another student to do so. Typically, such acts occur in relation to examinations. However, it is the intent of this definition that the term 'cheating' not be limited to examination situations only, but that it includes any and all actions by a student that are intended to gain an unearned academic advantage by fraudulent or deceptive means.

Plagiarism is a specific form of cheating which consists of the misuse of the published and/or unpublished works of others by misrepresenting the material (i.e., their intellectual property) so used as one's own work." Penalties for cheating and plagiarism range from a 0 or F on a particular assignment, through an F for the course, to expulsion from the College. For more information on the College policy regarding cheating and plagiarism, refer to the Catalog (Legal Notices on Cheating and Plagiarism) (Policies and Regulations). Any use of someone’s material, even if it is paraphrased, must be properly cited or it is considered plagiarism.

**Disruptive Classroom Behavior:** "The classroom is a special environment in which students and faculty come together to promote learning and growth. It is essential to this learning environment that respect for the rights of others seeking to learn, respect for the professionalism of the instructor, and the general goals of academic freedom are maintained. … Differences of viewpoints or concerns should be expressed in terms which are supportive of the learning process, creating an environment in which students and faculty may learn to reason with clarity and compassion, to share of themselves without losing their identities, and to develop and understanding of the community in which they live . . . Student conduct which disrupts the learning process will not be tolerated and may lead to disciplinary action and/or removal from class and or the College".

**Special Need(s) Students:** “Students with special need(s) should confer with the instructor on the first day of the class in order to discuss how the instructor might assist the student with his/her particular needs. The instructor will contact the Counseling Center to see how they can assist the student with the disability. Upon identifying themselves to the instructor, the student will be informed that the College DSPS is also available to assist students with disabilities receive reasonable accommodation for learning and evaluation.

*If you have special needs as addressed by the Americans with Disabilities (ADA) Act including alternate media requests, please notify your course instructor immediately. Reasonable efforts will be made to accommodate your special needs.*

* Please be sure cell phones and pagers are turned to vibrate. The use of cell phones in this class is extremely discouraged. Please wait until break time to use your cell phones. Texting during class is absolutely not allowed and will not be tolerated.
* iPods, MP3 players or any other music or media devices are not allowed in the class room. Leave them in your backpacks until break.

***THE INSTRUCTOR HAS DISCRETION TO MODIFY THIS SYLLABUS***