Basic Course Information

Semester	**Fall 2014**	Instructor's Name	**Jimenez, Javier**
Course Title & #	**Electrical Trades / ELTT 101**	Instructor's Email	**Javier.Jimenez@imperial.edu**
CRN #	**10891**	Webpage (optional)	
Room	**ETC-P5 (IID Headquarters)**	Office (PT Faculty:809)	
Class Dates	**18 AUG 2014 TO 13 DEC 2014**	Office Hours (n/a for PT Faculty)	
Class Days	**Wednesdays**	Office Phone # (PT may use dept. number)	
Class Times Units	**04:00 PM – 08:30 PM** **4.00**	Who students should contact if emergency or other absence	Javier.Jimenez@imperial.edu

Course Description

Basic mathematical functions and computations as they pertain to electricity and electronics. Introduction to basic principles of electricity, AC/DC circuits, electromagnetism, symbols, schematic diagrams, and fundamental safety skills as they pertain to on-the-job training. (Nontransferable, AA/AS degree only)

Student Learning Outcomes

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:

1. understand basic math as it pertains to basic electricity. (ILO2, ILO3)
2. understand ohms law, series and parallel circuits, also combination circuits. (ILO2, ILO3)
3. understand basic electromagnetic theory which will include magnetism, field strength, motor action and definition of electromagnetism. (ILO2, ILO3)
4. understand basic motors and generators. (ILO2, ILO3)

Course Objectives

MEASURABLE COURSE OBJECTIVES AND MINIMUM STANDARDS FOR GRADE OF "C":
Upon satisfactory completion of the course, students will be able to (these objectives are subject to change):
1. Practice standard safety procedures appropriate to the power utility industry.
2. Recognize and deal appropriately with hazardous materials in the power utility industry.
3. Manipulate certain mathematical functions pertaining to percentages, fractions, decimals, weights, and measurements, algebraic equations, and fundamentals of geometry applicable to electronics.
4. Employ fundamental computations as they relate to basic electricity and electronics; i.e., impedance, current, resistance, amperage, voltage, and circuitry.
5. Identify and analyze various principles as they apply to electrical theory; i.e., conductors, electrical potential, current impedance, and simple circuits.
6. Apply fundamentals of magnetism as they pertain to permanent and electromagnets, magnetic flux, and reluctance.
7. Recognize and employ essential electrical symbols and schematic diagrams.

Textbooks & Other Resources or Links

1. Electrical Lineman Training Committee (1990) Imperial Irrigation District's Lineman Apprenticeship Training Program Handbook Imperial, CA Imperial Irrigation District. ISBN: -.
2. Shoemaker, Thomas M. and James E. Mack (2012). The Lineman's and Cableman's Handbook (12th/e). New York McGraw-Hill. ISBN: 9780071742580 .

Course Requirements and Instructional Methods

Assignments are designed to elicit your demonstration of critical thinking, understanding and application of the course concepts, and your proficiency in the subject matter.

Required Activities or Assignments	Points
1. Homework, Assignments:	10
2. Laboratory Experiments:	10
3. Mid-Term Exam:	40
4. Final Exam:	40

Teaching Methods: Discussion of assignments and instructional methods will be a combination of all methods of instruction, which can be classified as telling, lecturing, or discussing; showing or demonstrating.

Out of Class Assignments: The Department of Education policy states that one (1) credit hour is the amount of student work that reasonably approximates not less than one hour of class time and two (2) hours of out-of-class time per week over the span of a semester. WASC has adopted a similar requirement.

Course Grading Based on Course Objectives

The course grade is based on total points accumulated during the semester. There is a maximum of 100 points. Very limited extra credit points may be available, either through some class participation activity, group work or perfect attendance. Failing to turn in regular assignments will stop you from being able to earn extra credit points and late assignments will have points subtracted.

Final Grades are calculated as follows:

Points	Grade
90-100	A
80-89	B
70-79	C
60-69	D
Below 60	F

Grading Rubrics: In addition to the percentages and points listed above the following grading rubric (standards expected) will be used when grading student assignments. The description that best fits your work will be the assigned grade.

Grade	Rubric or Standard Expected
A	Focused and clearly organized. Contains advanced critical thinking and analysis. Convincing evidence is provided to support conclusions. Clearly meets or exceeds assignment requirements.
B	Generally focused with some development of ideas, but may be simplistic or repetitive. Evidence is provided to support conclusions. Occasional grammatical errors. Meets assignment requirements, but does not exceed.
C	Unfocused, underdeveloped, or rambling, but has some coherence. Minimal evidence is provided to support conclusions. Several grammatical errors. Meets minimum assignment requirements.
D	Unfocused, underdeveloped, and/or rambling. Limited evidence is used to support conclusions. Serious grammatical errors that impede overall understanding. Does not address the assignment requirements

F	Unfocused, underdeveloped, and/or rambling. Incomplete or too brief. No evidence is used to support conclusions. Serious grammatical errors that block overall understanding. Does not meet assignment requirements. Minimal to no student effort.

Late Assignments will be accepted until the graded assignment is returned to the class, but assessed a penalty of 10 points per calendar day it is late.

Attendance

- A student who fails to attend the first meeting of a class or does not complete the first mandatory activity of an online class will be dropped by the instructor as of the first official meeting of that class. Should readmission be desired, the student's status will be the same as that of any other student who desires to add a class. It is the student's responsibility to drop or officially withdraw from the class. See General Catalog for details.
- Regular attendance in all classes is expected of all students. A student whose continuous, unexcused absences exceed the number of hours the class is scheduled to meet per week may be dropped. For online courses, students who fail to complete required activities for two consecutive weeks may be considered to have excessive absences and may be dropped.
- Absences attributed to the representation of the college at officially approved events (conferences, contests, and field trips) will be counted as 'excused' absences.

Classroom Etiquette

- Electronic Devices: Cell phones and electronic devices must be turned off and put away during class unless otherwise directed by the instructor. **Consider:** specifics for your class/program
- Food and Drink are prohibited in all classrooms. Water bottles with lids/caps are the only exception. Additional restrictions will apply in labs. Please comply as directed.
- Disruptive Students: Students who disrupt or interfere with a class may be sent out of the room and told to meet with the Campus Disciplinary Officer before returning to continue with coursework. Disciplinary procedures will be followed as outlined in the General Catalog.
- Children in the classroom: Due to college rules and state laws, no one who is not enrolled in the class may attend, including children.

Academic Honesty

- Plagiarism is to take and present as one's own the writings or ideas of others, without citing the source. You should understand the concept of plagiarism and keep it in mind when taking exams and preparing written materials. If you do not understand how to correctly 'cite a source', you must ask for help.
- Cheating is defined as fraud, deceit, or dishonesty in an academic assignment or using or attempting to use materials, or assisting others in using materials, or assisting others in using materials, which are prohibited or inappropriate in the context of the academic assignment in question.

  Anyone caught cheating or will receive a zero (0) on the exam or assignment, and the instructor may report the incident to the Campus Disciplinary Officer, who may place related documentation in a file. Repeated acts of cheating may result in an F in the course and/or disciplinary action. Please refer to the General School Catalog for more information on academic dishonesty or other misconduct. Acts of cheating include, but are not limited to the following: (a) plagiarism; (b) copying or attempting to copy from others during an examination or on an assignment ;(c) communicating test information with another person during an examination; (d) allowing others to do an assignment or portion of an assignment, (e) use of a commercial term paper service

Additional Help – Discretionary Section and Language

- Blackboard support center: http://bbcrm.edusupportcenter.com/ics/support/default.asp?deptID=8543
- Learning Labs: There are several 'labs' on campus to assist you through the use of computers, tutors, or a combination. Please consult your college map for the Math Lab, Reading & Writing Lab, and Learning Services (library). Please speak to the instructor about labs unique to your specific program
- Library Services: There is more to our library than just books. You have access to tutors in the learning center, study rooms for small groups, and online access to a wealth of resources.

Disabled Student Programs and Services (DSPS)

Any student with a documented disability who may need educational accommodations should notify the instructor or the Disabled Student Programs and Services (DSP&S) office as soon as possible. If you feel you need to be evaluated for educational accommodations, the DSP&S office is located in Building 2100, telephone 760-355-6313.

Student Counseling and Health Services

Students have counseling and health services available, provided by the pre-paid Student Health Fee. We now also have a fulltime mental health counselor. For information see http://www.imperial.edu/students/student-health-center/. The IVC Student Health Center is located in the Health Science building in Room 2109, telephone 760-355-6310.

Student Rights and Responsibilities

Students have the right to experience a positive learning environment and due process. For further information regarding student rights and responsibilities please refer to the IVC General Catalog available online at http://www.imperial.edu/index.php?option=com_docman&task=doc_download&gid=4516&Itemid=762

Information Literacy

Imperial Valley College is dedicated to help students skillfully discover, evaluate, and use information from all sources. Students can access tutorials at http://www.imperial.edu/courses-and-programs/divisions/arts-and-letters/library-department/info-lit-tutorials/

Anticipated Class Schedule / Calendar

Below is a tentative, provisional overview list (the dates and Activities, Assignments and/or Topics are subject to change) of weekly activities and assignments that will assist you in meeting the course objectives and the Student Learning Outcomes.

Date	Activity, Assignment, and/or Topic	Assignment Due
August 20	Syllabus & Introduction	
August 27	A. Industry safety Practices	
August 27	B. Hazardous Materials	
September 3	C. Fundamentals of Mathematics 1. Addition and subtraction 2. Multiplication 3. Common fractions, cancellation, and LCD 4. Decimals and Percentages 5. Square root and cube root 6. Useful terms and symbols 7. Positive and negative numbers	

	8. Calculator Functions 9. Weights and measurement 10. Introduction to algebraic equations 11. Applied geometry	
September 17	D. Basic Math for Electricity and Electronics 1. Introduction to electricity 2. Simple electric circuits 3. Electrical formulas 4. Review of Ohm's Law	
October 1	Review for Mid Term Exam	
October 8	Mid Term Exam	
October 15	E. Circuits 1. Series circuits 2. Parallel circuits 3. Combination circuits 4. DC circuits 5. AC circuits 6. Combination circuits 7. Combination circuits	
November 12	F. Electromagnetic Induction 1. Magnetism 2. Definition of electromagnetism 3. Field strength 4. Motor Action 5. Generators 6. Transformers	
December 3	G. Fundamentals of Electricity 1. Electrical symbols 2. Review and interpretation of schematic diagrams	
December 3	Review for Final Exam	
December 10	Final Exam	