ELTT 104 – Electrical Trades Spring 2013
Syllabus

Instructor: Adalberto Baca-Chavez
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Group Discussion: 4:00 – 8:30 PM on Tuesday

Textbook: Shoemaker, Thomas M. and James E. Mack (2012). *The Lineman's and Cableman's Handbook* (12th/e). New York McGraw-Hill. ISBN: 978007174580 NJATC (2007). *Transformation for Lineworkers* (2nd/e). Alexander. ISBN: B0024KX8XA

RECOMMENDED PREPARATION, if any: High school Trigonometry and Algebra

The structure of the class will consist of group discussions where we will explore current topics from a technical and application point of view.

Laboratory or hands on exercises will be done using the Doble protective relay test set, protective relays, current & voltage transformers as well as discrete meters.

Student Learning Outcomes (SLOs):
Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:

1. understand industry rules, regulations, and safety standards. (ILO2, ILO3)
2. understand how generators and the power grid works.
3. understand and describe the overhead distribution system including delta and wye connections, cutouts, switches, reclosers, sectionalizers, capacitors, and voltage regulators. (ILO1, ILO2, ILO3)
4. understand the various troubleshooting techniques on underground and overhead transformers, and cable fault location. (ILO2, ILO3)
5. AC Power Theory

INSTITUTIONAL LEARNING OUTCOMES (ISILOs):

1. Communication Skills
2. Critical Thinking Skills
3. Personal Responsibility
4. Information Literacy
5. Global Awareness

Grading Criteria

Course must be taken on a "letter-grade" (LG) basis only.

Grading Policy:	Attendance and participation =	3%
	Homework =	2%
	Quizzes	5%
	Midterm 1 =	20%
	Midterm 2 =	20%
	Final =	50%
		= 100% Total

All grades are calculated by using the standard scale of:

A= 100-90% ***B =89-80%*** ***C= 79-70%***

D = 69-60% **F** = 59% and below

WEEK #	DATE:	CORE CONTENT
		RULES AND REGULATIONS
Week 1:	01/15/2013	Introduction, What have you learned so far?
Week 2:	01/22/2013	Basic AC Theory
Week 3:	01/29/2013	Complex Numbers
Week 4:	02/05/2013	Test 1
Week 5:	02/12/2013	Electrical System Diagrams
Week 6:	02/19/2013	Transformer Connections
Week 7:	02/26/2013	Transformer Connections
Week 8:	03/05/2013	Transformer Connections
Week 9:	03/12/2013	Test 2
Week 10:	03/19/2013	Safety Regulations, Policies & Procedures
Week 11:	03/26/2013	Generation
Week 12:	04/02/2013	Overhead Distribution Systems
Week 13:	04/09/2013	Overhead Transmission Systems
Week 14:	04/16/2013	Power Grid Operations
Week 15:	04/23/2013	Substation Communications and Protocols
Week 16:	04/30/2013	FINAL