

Basic Course Information

Semester	Spring 2016	Instructor	Mario Sapin
Course Title & #	ELTT 103	Email	mdsapin@IID.com
CRN #	10864	Website	
Room	Foreman’s Training Room	Office	81 600 Avenue 58, La Quinta
Class Dates	February 16-June 10, 2016	Office Hours	6:00 AM – 3:30 PM
Class Days	Thursdays	Phone #	(760)396-5611
Class Times	4:00 – 8:30 PM	Contact for absence or emergency	(760)895-7540

Course Description

Theory and practicum in understanding the basic electrical fundamentals appropriate to the power utility industry. The course provides theoretical knowledge and practical application to complement the on-the-job training.

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 industry rules, regulations, and safety standards. (ILO2,ILO3)
2. Understand and describe the overhead and underground distribution systems its functions, constructions and applications. (ILO1, ILO2, ILO3)
3. Recognize and describe different transformer connections wye and delta.(ILO1, ILO2, ILO3)
4. Understand troubleshooting techniques on different equipment used in overhead and underground distribution systems. (ILO2, ILO3)

Course Objectives

Upon satisfactory completion of the course, students will be able to:

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. Identify and troubleshoot equipment problems.
4. Identify the basic equipment in the transmission and distribution systems and know the functions of the equipment.
5. Identify the basic equipment inside the substation and know the functions of the equipment.
6. Recognize different types of transformer.
7. Analyze, troubleshoot, and identify transformer connections.
8. Identify and implement industry-related safety protocols (i.e. Dig Alert, Grounding, etc.)

Textbooks & Other Resources or Links

- Cleaver, R. J., Meeusen,E. J. and Wells Jr., R. A. (2005). *Fundamentals of Electricity Volume 1 & 2*
- Shoemaker, Thomas M. and James E. Mack (2012). *The Lineman's and Cableman's Handbook* (12th/e). New York McGraw-Hill. ISBN: 978007174580

Teaching Methods: During this class you will have opportunity to participate in a variety of presentation and teaching methods. Lectures, including material not covered in your readings, class and group discussions requiring your active participation, student oral presentations, and films or field trips will supplement your required readings.

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. Out of class assignments for this course includes reading assignments, study time for exams/quizzes, and completion of required course assignments. Students should actively read the assignment prior to class, bring any questions to class, and take careful notes during class.

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.
- 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.

Academic Dishonesty

- 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 clearly 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 will receive a zero (0) on the exam or assignment, the incident will be reported to the division dean and the dean of Student Affairs, and a document may be placed 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:
 - plagiarism
 - copying or attempting to copy from others during an examination or on an assignment;
 - communicating test information with another person during an examination;
 - allowing others to do an assignment or portion of an assignment
 - use of a commercial term paper service

Classroom Etiquette

- Electronic Devices: Cell phones and electronic devices must be turned off and put away during class. Cell phones ringing during class and all electronic devices not put away will be held by the instructor until the end of class as these disruptions are considered disrespectful behavior to others in the class and the instructor.

- 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: Most of you are here to learn, but some students are not as serious. To preserve a productive learning environment, 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.

Additional Help

- 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. The DSP&S office is located in Building 2100, telephone 760-355-6312 if you feel you need to be evaluated for educational accommodations.

Student Counseling and Health Services

Students have counseling and health services available, provided by the pre-paid Student Health Fee. You can find out more about services available for students at <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; students who disrupt that environment can be asked to leave the class. Faculty and students also have the right of due process. For further information regarding student rights and responsibilities please refer to the IVC General Catalog available online at www.imperial.edu

Class Schedule

Below is a list of weekly activities and assignments that will assist you in meeting the course objectives and the Student Learning Outcomes. Please review carefully and often as the list may reading assignments, exams, field trips, projects, presentations, etc.

Electrical Trades (ELTT 103)

Class Syllabus

ELTT 103

Date	Week	Core Content	Homework/ Reading	Assignment Due
18-Feb	1	Review of Fundamental of Electricity (DC)		
25-Feb	2	Review of Fundamental of Electricity (DC)		
3-Mar	3	Review of Fundamental of Electricity (AC)		
10-Mar	4	Review of Fundamental of Electricity (AC)		
17-Mar	5	Introduction to Distribution Systems (Overhead)		
24-Mar	6	Introduction to Distribution Systems (Overhead)		
31-Mar	7	Distribution Transformer functions		
7-Apr	8	Distribution Transformer constructions and applications		
14-Apr	9	Midterm Review and Exam		
21-Apr	10	Introduction to Distribution Systems (Underground System)		
28-Apr	11	Primary voltage connections		
5-May	12	Secondary voltage connections		
12-May	13	Pad Mounted Transformers and switching		
19-May	14	Underground Residential Distribution System		
26-May	15	URD Troubleshooting		
2-Jun	16	Plant and/or Substation visit		
9-Jun	17	Safety Class, Review and Final Exam		