COURSE INFORMATION FORM

DISCIPLINE
INTE
COURSE TITLE
Conductor Installation and Metering
CR.HR 3  LECT HR. 1  LAB HR. 4  CLIN/INTERN HR.  CLOCK HR. 

CATALOG DESCRIPTION
The student will gain extensive knowledge of single and three-phase watt-hour meters; meter locations; and the different types of copper and aluminum conductors. The student will also gain practical experience in the sizing, proper connection types, installation, stringing, sagging, dead-ending, and splicing of overhead and underground service conductors.

PREREQUISITES
LINE 237

EXPECTED STUDENT OUTCOMES IN THE COURSE (ESO)
Upon completion of this course, the student will be able to:
1. Demonstrate proper safety practices.
2. Select proper cable/wire for various installations.
3. Construct temporary service installations.
4. Parallel residential and commercial service.
5. Describe proper metering and instrumentation procedures.
6. Describe and demonstrate proper grounding techniques.
7. Describe tampering and power theft safeguards.
8. Construct temporary meter locations.

GENERAL EDUCATION OUTCOMES (ESO)
Specify which general education outcomes, if any, are substantially addressed by the course. Numbers in parentheses identify the Expected Student Outcomes linked to the specific General Education Outcome.

Life-Long Learning: Attributes of an Awareness of the Convergence of Knowledge
2. Apply learned skills to real world interactions (1, 2, 3, 5, 8)
3. Synthesize information to facilitate application (2, 5, 6, 7)
4. Seek new solutions to new and old problems (1, 2, 4, 8)
5. Perceive learning as an all-pervasive activity in all phases of life (1, 3, 4, 8)
PROGRAM-LEVEL OUTCOMES

CAREER AND TECHNICAL EDUCATION PROGRAM OUTCOMES
Specify which Career and Technical program outcomes, if any, are substantially addressed by the course by completing the “Career and Technical Education template” to show the relationship between course and program outcomes to assessment measures.

The student will demonstrate:

1. The ability to apply foundational skills in an industrial setting, safely and to industry guidelines.
2. Professional oral and written communication skills.
3. Thinking critically and applying problem-solving skills.
4. Competency in the entry-level skills required for graduation from Electric Utility Line Technician program.
5. Certified competency in electrical safety.

CLASS-LEVEL ASSESSMENT MEASURES
Student accomplishment of expected student outcomes will be assessed using the following measures. (Identify which measures are used to assess which outcomes.)

Written Tests: 1-8
Assignments: 1-8
COURSE OUTLINE FORM

DISCIPLINE       INTE

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Individual instructors may order this outline as fits the needs of their individual courses. In addition, they may place more emphasis on some areas than on others. What is assured is that this particular list is covered in the course. Other topics may be added to a course as the instructor sees fit, and as time and interest allow. An *asterisk can be used to mark an item as optional.

I. Electrical Properties of a conductor
   A. Ampacity of a conductor
   B. Voltage Rating/Drop
      1. Single phase
      2. 3-phase
   C. Conductor sizes

II. Overhead conductors
    A. Types
    B. Bundled conductors
    C. Aerial spacer
    D. Secondary and Primary
    E. Service Drop

III. Working with overhead conductors
     A. Primary and secondary connections
     B. Parallel connections
     C. Conductor sizing
     D. Splicing

IV. Underground cable
    A. Types of underground service cable
    B. Cable design
    C. Shielding and failure
    D. Secondary splicing and repair

Revised 1/26/10