

SOUTHEAST COMMUNITY COLLEGE
ADVANCED TECHNOLOGIES AND SKILLED TRADES DIVISION
Utility Line Worker Program
Revision Date: November 2025

I. CATALOG DESCRIPTION

Course Number: UTIL 2420
Course Title: Advanced Power Line Construction and Maintenance
Prerequisite(s): UTIL 1901, UTIL 1140

Catalog Description: This course integrates advanced theory and field practices in the construction and maintenance of overhead and underground power lines. Students learn the safe use of high-voltage tools and equipment, including rubber gloving techniques for energized work. Instruction covers the installation, operation, and maintenance of primary and secondary underground cables, along with the use of digger, aerial, trencher, and backhoe equipment. Emphasis is placed on industry safety standards, efficient work methods, and applied problem-solving in real-world field conditions.

Credit Hours: 6.0
Class Hours: 45
Lab Hours: 135
Total Contact Hours: 180

II. COURSE OBJECTIVES: *Course will:*

- A. Emphasize advanced safety practices and the establishment of safe work environments for all overhead and underground power line operations.
- B. Develop proficiency in planning and performing energized (“hot”) work using industry-standard tools, equipment, and procedures.
- C. Strengthen the ability to interpret work prints, apply National Electrical Safety Code standards, and perform efficient setup of trucks and work sites.
- D. Foster teamwork, organization, and communication skills essential to effective field operations.
- E. Promote critical thinking and problem-solving in troubleshooting line outages and completing field projects safely and productively.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES

- A. Student Learning Outcomes:** *Student will be able to:*
- 1. Identify and discuss potential hazards associated with overhead and underground line work.
 - 2. Perform energized (“hot”) work safely using proper rubber cover-up, maintaining OSHA-required clearances, and following all protective grounding procedures.
 - 3. Plan and set up work sites efficiently, including the proper positioning of digger derricks, aerial lifts, and trucks.
 - 4. Interpret construction specifications and stake overhead and underground lines according to industry standards.
 - 5. Operate high-voltage tools and equipment safely and effectively, including inspecting, cleaning, and maintaining hot line tools.

6. Collaborate effectively with team members to complete tasks safely, efficiently, and in compliance with established procedures.
7. Apply problem-solving and troubleshooting skills to resolve system issues encountered during field operations.

B. General Education Learning Outcomes

1. GELO #3: Critical Thinking and Problem Solving
 - a. Outcome #1: Collect, identify, interpret, and analyze data.

IV. CONTENT/TOPICAL OUTLINE (*course outline may provide more detailed information*)

A. TBD

- 1.

V. INSTRUCTIONAL MATERIALS

A. Required Text(s): TBD

B. Other Resources:

- 1.

VI. METHODS OF PRESENTATION/INSTRUCTION

A. Methods of presentation typically include a combination of the following:

- 1.

VII. METHODS OF EVALUATION

A. Methods of evaluation typically include a combination of the following:

1. Participation
2. Daily Assignments
3. Written exams/quizzes
4. Lab performance

C. SCC STANDARD GRADING SCALE POLICY:

A+	95-100	C+	75-79	F	59 or less
A	90-94	C	70-74		
B+	85-89	D+	65-69		
B	80-84	D	60-64		

VIII. SPECIFIC COURSE REQUIREMENTS