



test. Rigging, wire identification, and use of rubber goods will also be learned. Safety topics include: Rigging Safety Awareness; Fall Protection; Flame Retardant Personal Protective Equipment; Medic First-Aid; Bloodborne Pathogens; and, Good Housekeeping.

### **III. Statement of Course Need**

- A. UTIL-101 is required the first semester of the first year. The course will give students the fundamentals and skills in the understanding of wood pole, transformer installation and substation technology. Based on the Electrical Utility Industries Standards, the course will provide the students with the basic understanding of the operation, installation and trouble shooting skills of high voltage circuits. This course is required by the Electric Utility Industry to insure students will receive basic training in all aspects of high voltage circuitry.
- B. There is no lab component to this course.
- C. This course is not designed for transfer.

### **IV. Place of Course in College Curriculum**

- A. This course meets a program requirement for the Electrical Utility Technology A.A.S.
- B. To see course transferability: a) for New Jersey schools, go to the NJ Transfer website, [www.njtransfer.org](http://www.njtransfer.org); b) for all other colleges and universities, go to the individual websites.

### **V. Outline of Course Content**

- A. Wood Pole Climbing
- B. Tool and Material Identification/Familiarization
- C. Setting & Framing Poles
- D. Rigging
- E. Wire
- F. Driver's Training
- G. Safety

### **VI. General Education and Course Learning Outcomes**

**A. General Education Learning Outcomes:**

1. Communicate how to properly maintain regulations required by the Occupational Safety & Health Administration (OSHA). (NJ-GE1)
2. Demonstrate an understanding of the generation and distribution of electricity. (NJ-GE3)
3. Demonstrate proper operation of a safe and efficient rigger. (NJ-GE4)

**B. Course Learning Outcomes:**

1. Demonstrate proper ladder set up and rope block utilization.
2. Install service poles and home service.
3. Demonstrate service splicing, sagging and splicing open of three wire secondary conductors, and sagging of triplex secondary conductors.
4. Identify and install meter and street lights.
5. Transfer service from an existing pole to a new pole.
6. Demonstrate operation of voltage and measuring devices.
7. Inspect and install rubber goods.
8. Demonstrate how to test a meter base.
9. Utilization of a web strap hoist.
10. Install secondary spreader.

**C. Assessment Instruments**

1. Written Exams
2. Hands-on Assessment(s)
3. Observance of Safety Rules & Practices
4. Final Exam

**VII. Grade Determinants**

1. Written Exams
2. Hands-on Assessment(s)
3. Observance of Safety Rules & Practices
4. Final Exam

Primary formats, modes, and methods for teaching and learning that may be used in the course:

1. Lecture/discussion
2. Small group work
3. Guest speakers
4. Laboratory
5. Student collaboration

6. Demonstrations

**VIII. Texts and Materials**

- A. All materials will be provided by First Energy

**IX. Resources:**

- A. Each student will be required to provide their own Linemen boots and flame retardant apparel.