

Course Name: **Renewable Energy & Communications Tower Technician Program**

Course Number: **AS1007**

Duration of course: **30 days (8 hours each)**

Ratio: **Classroom: 24 students to 1 instructor**

Lab: 8 students to 1 instructor

This course is recommended for anyone interested in an entry-level position in any energy or industrial sector (wind, oil, natural gas, and communication towers).

Hours of Instruction: 8 hours per day, 5 days per week, 40 hours per week, 6 weeks, for a total training period of 240 clock hours.

Admission Requirements: High School diploma or equivalent. Must be capable of climbing and working at heights of up to 300 feet. Weight limit of 285 pounds (due to equipment specifications). Ability to read and speak the English language.

Synopsis of course: This course offers a complete complement of safety and technical modules designed to prepare each student for an entry-level position in the wind, oil, natural gas, communication tower and many other industrial focused industries. Emphasis will be placed on working safely in all aspects of the technician job and the basic technical skills. Students will be able to explain, identify, and demonstrate safe troubleshooting and maintenance procedures utilized in the wind, cellular communication tower and other industrial based industries. Throughout the course students apply their knowledge during verbal reviews, quizzes, hands-on lab practical evaluation sessions, and final exams.



Required Equipment: Sturdy work/hiking boots (composite or steel-toed preferred, but not required) steel or fiber glass shank with a defined heel; Cotton pants and cotton shirts; Form fitting, durable work gloves (examples: CLC 125 Handyman, Mechanix Wear, Iron Clad); Cold weather gear (examples: wind resistant lined work jackets, hooded sweatshirt, balaclava, insulated overalls or coveralls, natural fiber upper/lower "long johns"); PPE will be provided.

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Course curriculum consists of the following required modules:

- Student Orientation, iPad 101, and Intro to the Wind and Communication Tower Industries
- Resume and Cover Letter Workshop
- Interview Workshop
- Safety in the Industries
- CPR/First Aid/AED
- OSHA 10 Hour Construction Safety
- Authorized Climber and Rescue*
- Crane Signalperson
- Level 1 Crane Rigging
- Direct Current Theory
- Alternating Current Theory
- Voltage Test Procedures, Electrical Metering Safety, Voltage Test Equipment (Includes Multimeter, Amp Clamp, Megohmmeter, Infrared Tester, Phase Rotation Meter, Tic Tracer)
- Fasteners, Torque and Tension
- Basic Hydraulics
- Electrical Systems, Components, and Schematics
- Drivetrain Gearboxes
- Yaw Systems
- Maintenance Practices
- Hytorc Labs, Electrical Meters Labs, Electrical Troubleshooting Labs, Climbing Exercises and Labs
- Cell Site Basics
- Radio Frequency Awareness
- Capstan Hoist
- Lines and Antennas
- CADWELD
- Final Exams
- Homework Packets: Electric Static Discharge, Fiber Optics, SCADA/Data Analysis, Communication Tower Vocabulary

* This lesson meets or exceeds the National Association of Tower Erectors (NATE) requirements of the Tower Climber Fall Protection Training Standard

Upon successful completion and demonstration of proficiency, students will earn the following certifications:

Authorized Climber and Rescue Certificate and ID Card; Electrical and Electrical Metering Safety Certificate; Fasteners, Torque and Tension Certificate; OSHA 10 Hour Construction Safety Card; American Red Cross First Aid/CPR/AED Card; Level 1 Crane Rigging Certificate; Crane Signalperson Certificate; Capstan Hoist Certificate; CADWELD Certificate; ARI Renewable Energy and Communications Tower Technician Certificate

