

## UTILITY ARBORIST – PROGRAM PHILOSOPHY & DESCRIPTION

### SECONDARY EDUCATIONAL LEVEL

#### **Program Philosophy:**

Having electricity as a resource is often taken for granted, but in its absence, many basic needs of society including health care, education, communication, transportation, security and others would be severely crippled – substantially limiting the quality of life for all Americans. In order to provide safe, reliable delivery of electric power that satisfies these needs, the role of the utility arborist in the vegetation management process is of critical importance.

Trees provide many benefits and will always be a very important part of a well balanced, healthy external environment. Therefore, all sectors of tree care management must be performed professionally and responsibly, including utility arboriculture. Educated, knowledgeable and skilled tree care workers act as stewards of nature, benefiting both society and the environment.

Technical education in utility arboriculture, offered at the high school vocational level, will serve as an institution where basic tree care skills are developed subsequently providing students with many exciting career opportunities. Equally important, this program will serve to provide a quality and efficient labor resource for the utility arborist industry. Once these basic skills are learned, they are transferable to other green industry disciplines that help maintain the health and well-being of our many natural surroundings. The program will not only teach tree care skills, but will also focus on developing advocates of professional tree care practices. It provides yet another career starting point in which students will become productive contributors to society.

**The utility arborist program will benefit: students** – by providing an adventurous skilled trade where jobs are in high demand; **the community** – by offering professional tree care skills and lucrative career paths; **the economy** – by providing skilled and efficient workers for utility vegetation management processes; and, **the environment** – by ensuring arboricultural “best practices” are used based on sound scientific research and development.

One important **goal of the utility arborist program** is that participating high school students will learn the basic fundamentals of tree care so that they may enter the workforce in a productive capacity, or, continue their academic learning by attending a two or four-year college in a tree care or forestry related program.

This program of study will allow students, particularly non-traditional ones, and the community at large to have access to education that provides a meaningful career and life-long learning opportunity.

### **Program Description:**

Students interested in the **Utility Arborist Program of Study** will learn to perform the basic fundamentals of tree trimming and removal procedures in order to clear right-of-way for electric power lines and apparatus so to minimize storm and short-circuit hazards. This objective will be accomplished through the student learning to climb trees safely in order to reach branches interfering with electric lines and apparatus using climbing equipment and sound work practices. The student will also learn to operate chain saws, pruners, brush chippers and to operate an aerial lift device to achieve the industry objective.

Students will participate in a structured classroom learning environment in which knowledge will be gained in: Safety; electrical hazards; tree health and science; climbing; pruning; rigging; and removal. Learning will be complimented by written assignments, classroom discussion, and hands-on experiential learning in a field laboratory environment. Students will also develop math skills, reading skills, listening skills, safety skills, communication skills, business skills and employability skills.

The **Utility Arborist Program of Study** curriculum and competency structure will be aligned with the **International Society of Arboriculture (ISA)**, **Certified Tree Worker** designation and the **Tree Care International Association (TCIA)**, **Electrical Hazard Awareness Program**. These are internationally recognized industry training and certification programs in which students will master a body



of knowledge and demonstrate proficiency in the tree care industry. The curriculum will serve as the “choice” model for introductory training in the utility arborist industry. The **objectives of the industry training and certification** programs are:

- To be an educational program that will improve technical competency of the personnel in the tree care industry.
- Inform students and workers about the hazards associated with working around electrical conductors.
- To create incentives for these individuals to continue their professional development.
- To provide the public and those in government with a means to identify those professionals who have demonstrated, through professionally developed exams and educational programs, that they have knowledge and skills in tree care practices.

**Benefits of the certification** program include:

- Certification builds self-image. By studying for and passing the exam, individuals reaffirm to themselves and their peers a thorough knowledge and dedication to arboriculture and safety.
- Certification affords to the public, those in government, and the commercial sector the opportunity to make an informed selection of services based on the knowledge that is represented by certification designations.
- Provides incentives to the individual to continue his/her on-going professional development.
- Represents a tool to help the employer both in training its personnel and selecting new employees.
- Ensures that workers receive training that meets, or exceeds, safety compliance requirements.

#### **Skills You Will Learn in the Utility Arborist Program of Study**

- ◆ How and why to comply with federal, state and local safety rules (OSHA & ANSI).
- ◆ Operate a chain saw safely as required by the manufacturer, OSHA, and ANSI safety standards.
- ◆ Become proficient in proper chain saw cutting techniques.

- ◆ Demonstrate satisfactory progress in tree felling operations.
- ◆ Demonstrate competence and safety while using a chain saw in a tree and/or from an aerial lift device.
- ◆ Proper handling and use of industry hand tools such as pole pruner, pole saw, hand saw, axe, sledge, wedge, broom, shovel, rake, canthook, etc.
- ◆ Proper use and care of ropes, blocks and other rigging equipment.
- ◆ Rigging and roping techniques.
- ◆ Proper use of ladders.
- ◆ Brush control at the work site including trimming, dragging, cutting, and stacking.
- ◆ Proper operation of a brush chipper.
- ◆ Work area clean-up including raking, sweeping, shoveling, tool storage, etc.
- ◆ Safe and efficient set up of trucks, brush chippers and/or aerial lift unit.
- ◆ Ability to understand and identify electrical hazards and electrical system components.
- ◆ Ability to explain phase to phase and phase to ground.
- ◆ Ability to explain direct and indirect contact with energized conductors.
- ◆ Know and fully understand the hazards associated with line clearance tree trimming and removal including the minimum approach distance requirements relating to electrical hazards.
- ◆ Understand conductivity and resistance of various tools.
- ◆ Emergency response techniques
- ◆ Become proficient in aerial rescue technique.
- ◆ Become proficient with knots used in the utility arborist industry.
- ◆ Ability to work safely in extreme weather conditions.
- ◆ Ability to recognize environmental hazards and take preventive measures to avoid exposure.
- ◆ Public relations
- ◆ Become proficient in basic tree identification and characteristics.
- ◆ Proper tree pruning techniques (ANSI A-300 Pruning Standards).
- ◆ Ability to climb trees and comfortably work aloft.

- ◆ Practice proper use and care of the “life-line” climbing rope.
- ◆ Understand hand climbing methods and safety precautions.
- ◆ Proper use and care of climbing safety saddle, rope lanyard, and all other climbing equipment.
- ◆ A basic knowledge of aerial lift device operation, systems, and maintenance.
- ◆ Hazards associated with boom location in regard to electrical conductors, obstacles and high-profile vehicles.
- ◆ Proper lifting techniques.
- ◆ Participate in and lead safety meetings.

### **Student Requirements**

- ◆ Wear proper work attire
- ◆ Wear proper footwear
- ◆ Wear leather gloves
- ◆ Wear warm outdoor clothing
- ◆ Willingness to keep safety an absolute first priority
- ◆ Ability to work in a cooperative team environment
- ◆ Wear hard hat, safety glasses and face shield