

BASIC ARBORICULTURE COURSE¹

by James J. McKeehen

Our "Basic Arboriculture Course" is designed to train students in the introductory principles of tree maintenance. Major emphasis is placed on learning the skills required to climb and prune trees. The eight-day course was held in March of 1973, 1974, and 1975. A total of 65 students have completed the training course successfully. Students have typically been both new and older employees of arborists, municipalities, arboreta and other institutions. Their employers have encouraged their enrollment.

The course is offered annually by the Cooperative Extension Service of The Pennsylvania State University, in Philadelphia's Fairmount Park, for students throughout southeastern Pennsylvania. Students from nearby states have also participated. The Penn-Del Chapter of the ISTC is a co-sponsor of the course. The Chapter's Executive Board provides guidance and financial backing. The training course concept, for new employees, grew from discussions in Chapter board meetings in the early 1970's. A preliminary course outline was developed; both committee and board action refined the course, and in March 1973, the first 19 students enrolled.

The course is based on the concept of "show and tell". Each of the eight days is divided into a classroom situation and field training. The teaching time allocated is 7 1/2 hours per day, one and one half hours of classroom and six hours of work in the field. Each day's classroom time is used to teach and demonstrate information that will be practiced by the students in the field. As an example, the first day's classroom activity is a discussion and demonstration covering the various basic knots associated with the climbing line and saddle. Included in these talks are basic safety ideas. The remainder of the day is used in learning the knots. The primary climbing principles are taught and demonstrated also. Usually, all of

the class have learned the knots and spent several hours up and down the tree by the end of the first day. During the first days of the school, the instructors place the climbing lines in the tree. The students work in a buddy system, one student handling the ground end of the climbing line for both safety and ascension ease. During early classes, students and instructors often discuss some newly discovered muscles used in climbing.

The teaching team is made up of two instructors hired by the Cooperative Extension Service. These men are arborists who own their own businesses and are active, experienced climbers. They have demonstrated proper skills and knowledge in the field and have the ability to instruct. The classroom instruction responsibility is divided between the instructors and the Cooperative Extension Service personnel. The instructors teach all the field work. A ratio of one instructor to approximately 10-12 students is judged most effective.

The major thrust of the course is to teach students to climb and prune. New climbers seldom receive concentrated instruction in an on-the-job situation. ISTC board members were aware and concerned about this, and so the course emphasis is designed in this direction. Students completing the "Basic Arboriculture Course" will not be accomplished, polished climbers. However, they will have a satisfactory basic understanding of the principles and skills required in the field of tree maintenance and tree climbing. With supervision and continued guidance, these students will quickly develop the ability and extra confidence to perform satisfactorily for their employers. Employers who sent students to the course have indicated that these trainees have become productive and profitable workers more quickly than non-course-trained climbers. They also indicated the students have up-graded regular climb-

1. Presented at the International Shade Tree Conference in Detroit, Michigan, in August, 1975.

ers' safety practices and, occasionally, climbing techniques.

Other aspects of tree maintenance are taught. Even though reduced emphasis is given to these areas, students are exposed to and expected to learn about these important aspects of tree maintenance. The lectures stress safety in climbing, equipment use, and pesticide application. Proper clothing is a part of this discussion. Tree biology is emphasized. This area includes talks on how a tree grows, how wounds heal, insects, diseases, fertilization, tree terminology, identification, suitable tree sites, soils and drainage. Lectures and demonstrations about use and care of hand and power tools are covered. Tree removal is demonstrated and practiced. The students listen to lectures, view films, discuss, see demonstrations and finally, participate in actual situations during the field work.

The final day of the course is devoted to testing and graduation. The students have been aware from the beginning of the course that a written test covering all lectures and field work would be given. Most students took notes throughout the course. The written exam consists of multiple choice, true and false, and essay questions. In addition, passing a proficiency test covering climbing and pruning is required for graduation. Each student, on his own, under the watchful eye of the instructors, must satisfactorily climb and prune a few branches of a 50-80 foot tree. Students have been encouraged to invite their employers to the proficiency test, so that they can see the student in action. Employers are encouraged to remain for the graduation lunch and certificate presentations. All graduating students are awarded a certificate of recognition and seven registered "Extension Quality Credits," by the Pennsylvania State University. The Penn-Del Chapter presents the graduates with *The Arborists Code of Ethics*.

The Basic Arboriculture Course is open to anyone. The Penn-Del Chapter of ISTC suggests

that each company who desires a graduate from the course recruit and select their own students. Students can be sponsored and/or employed by a company. Students are urged to have a physical examination prior to course participation. Students must provide their own climbing equipment, climbing line, saddle, hard hat and saws. Enrollment cost in 1975 was \$90.00 per student. This covers all educational costs and provides each student with several educational texts covering subjects to be taught. The student then has in his possession future arboriculture references.

Interviews with students who completed the course indicate that the training received was worthwhile and has provided an excellent base for growth into the field of arboriculture. Many of the students are members and active in ISTC events. Plans are currently under way to offer the course in 1976.

Abstract

Sixty-five students completed an Arboriculture Course designed primarily to teach climbing and pruning skills to new arborist employees. The course is co-sponsored by the Cooperative Extension Service of the Pennsylvania State University and the Penn-Del Chapter of ISTC. The eight-day course was conducted in 1973, 1974 and 1975. The seven and one-half hours per day of teaching time is divided into 1 1/2 hour lectures, and six hours of field work. Subjects are taught by "show and tell". Enrollment costs are \$90.00 per student. Students provide climbing line, saddle, hard hat and saws. Two active, climbing arborists in businesses of their own are employed as instructors. Student instructor ratio is 1:12. Emphasis is also given to the areas of tree biology, identification, insects, diseases and culture. Satisfactory graduation from the course is based on a written exam and a climbing and pruning proficiency demonstration. Graduates of the course will not be accomplished climbers but they will have learned satisfactory skills. Most graduates have performed productively and profitably for their employers. 1976 course plans are currently under way.

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