

Science of Tree Felling

FOR 396: 1 credit

May24-26, 2023, Treehaven, Tomahawk, WI

Introduction

This 3-day field course is open to 25 students. The class will provide practical, hands-on training to develop the skill-set necessary to effectively and safely fell standing trees. The OSHA compliant approach to training is comparable to an apprenticeship program; students will work closely and in small groups (2-3 students) with a professional arborist or logger. Felling techniques will be further reinforced through repetition. Students will, therefore, be asked to fell multiple trees over the course of the class.

Objective:

Provide field experience in chainsaw maintenance, operation, notching and felling cuts, and developing cut plans to effectively and safely fell standing trees.

Learner Outcomes:

At the end of the training program students will be able to:

1. Demonstrate the reaction forces on a chainsaw.
2. Identify hazards in and around the tree to be felled.
3. Develop an appropriate cut plan that takes into account weighted leans, hinge wood, and a suitable escape route.
4. Create an appropriate open-faced notch.
5. Demonstrate the ability to create an appropriate felling hinge using bore cuts.
6. Calculate lift potential when using a felling wedge.
7. Determine need for and the ability to employ mechanical advantage in the felling of trees.
8. De-limb and buck a felled tree in a safe and effective manner.

Program Outline:

Day 1 am: Chainsaws and chainsaw maintenance.
Day 1 pm: Felling and cut plans, Demonstration (group - classroom & field)
Day 2 am: Cut plans, notches, bore cuts, hinge wood, release cuts, weighted leans, and wedges (group - field)
Day 2 pm: Tree felling (teams - field)
Day 3 am: Tree felling (teams - field)
Day 3 pm: Tree felling (teams - field)

Note: Group = demonstration, discussion, and small groups

Team = 1-3 students per field instructor

Program will run from 9:30 - 4:30 pm Friday, 8:00 am - 5:00 pm Sat., Sun.

Students participating in the training program will be supplied with all necessary personal protective equipment (PPE), chainsaws and associated felling equipment. Students must provide and use appropriate footwear (sturdy soled boots that go above the ankle) during the field portions of the class. Students are expected to dress appropriately for the weather.

Before participation in the class, students are asked to work through the following training videos produced by Husqvarna.

Personal Protection Gear

[Chainsaw How To - Personal Protective Equipment - YouTube](#)

Starting a chainsaw:

<https://www.youtube.com/watch?v=QKR6up2DiZ4>

Directional Felling/Notch/Hinge:

[How To Make Tree Felling Notches And Hinges With A Chainsaw | Husqvarna - YouTube](#)

Following the completion of the class and field work, students will be required to pass an examination.

Grades will be based on the following:

Class/Field participation 85%

Final Exam 15%