

FOR 396: Science of Tree Felling

Instructors & Office Hours:

Instructor: Dr. Demchik (CNR 246; mdemchik@uwsp.edu):

Monday 1000-1100, 1400-1500, Tuesday 1500-1600; open door policy

Introduction

This 3-day field course offered March 22-14, Treehaven, Tomahawk, WI. 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:

- Friday AM: Chainsaws and chainsaw maintenance.
- Friday PM: Felling and cut plans, Demonstration (group – classroom & field)
- Saturday AM: Cut plans, notches, bore cuts, hinge wood, release cuts, weighted leans, and wedges (group – field)
- Saturday PM: Tree felling (teams – field)
- Sunday AM: Tree felling (teams – field)
- Sunday 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](#)

Grades will be based on the following:

- Class/Field participation 80%
- Stump assessment 20%