

Wisconsin Forestry Center

www.uwsp.edu/wfc

Wisconsin Forest Industry Workforce Recruitment and Development Initiative



Wisconsin Forestry Center
College of Natural Resources
University of Wisconsin - Stevens Point



WFC Mission

Dedicated to serving the needs of Wisconsin's forestry community through initiatives that promote vibrant, sustainable forests and forest-based economies.

WFC Mission Areas

- Professional Development
- Applied Research
- Workforce Recruitment and Development
- Public Outreach



Visual merchandising workshop

The Need

Persistent and ongoing need within the forestry industry for skilled entry-level employees



Program Goal

Establish a forestry career pathway program consisting of applied high school curriculum in forestry and immersive training programs.



Professional Focus Group

11 attendees from various sectors including:

- Forest Management
- Forest Products
- Urban Forestry



High School Teachers Focus Group

Incorporation

6 attendees from various high schools:

- Merrill
- Antigo
- Elkhorn
- Janesville-Parker
- Mount Horeb
- Pulaski



Applied Forestry High School Curriculum

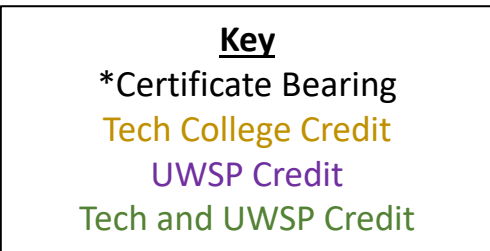
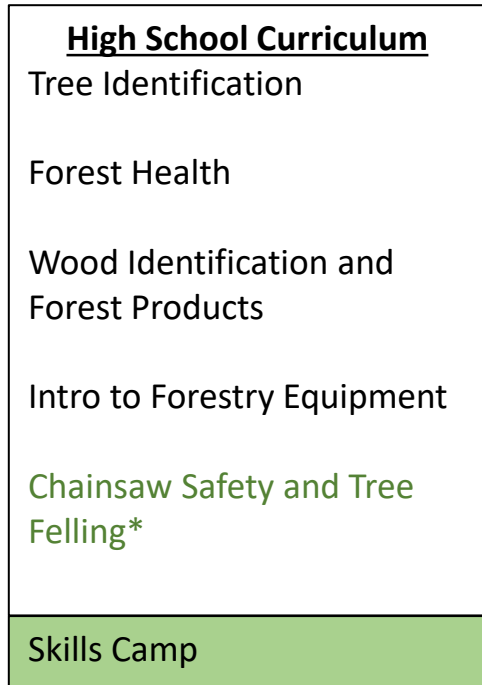
	Required Training Modules					
	Tree Identification	Forest Health	Forest Products	Forestry Equipment	Chainsaw Safety and Tree Felling*	Skills Camp**
Content Areas	General Tree Anatomy/Structure	General forest health	Types of forest products and services	Common equipment and their purpose	Chainsaw mechanics	Equipment operation
	Dichotomous key use	Invasive species identification and management/control	Primary and secondary wood products	General safety, inspection, and operation	Chainsaw maintenance	Tree felling
	Tree identification by: leaf, twig, and form	Forest diseases identification and management/control	Types of lumber		Chainsaw safety	Tree identification
	General silvics for common species	Forest pest identification and management/control	Wood identification		Directional Felling**	Forest health prescription writing
		Tree risk identification and mitigation	Log grading		Mechanical advantage**	Milling and drying
			Lumber grading			Log and lumber grading

* Certificate bearing

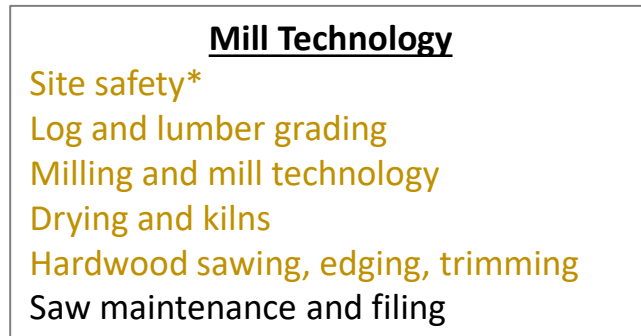
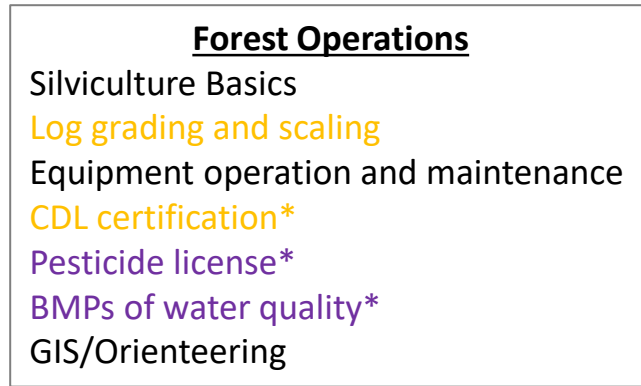
**Off-site training by program staff

Program Pathway

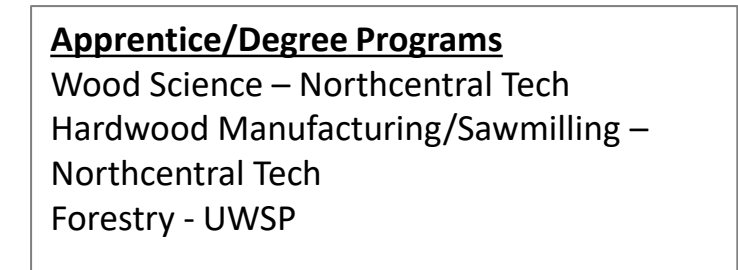
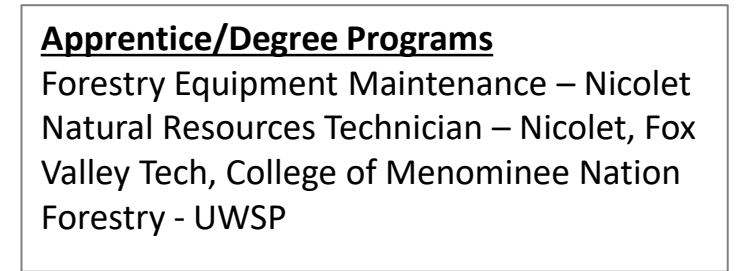
Step 1: High School Program



Step 2: Immersion Program *(Assumes completion of the HS program)*



Step 3: Degree Program



Forest Operations Program Overview

Applied High School

Tree Identification

- General tree anatomy/structure
- Dichotomous keys
- Tree ID by leaf and twig
- General silvics of common species

Forest Health

- Identification, management, and control of: invasive species, forest diseases, forest pests, and tree risk

Forest Products

- Types of forest products and services
- Primary and secondary wood products
- Types of lumber
- Wood identification
- Log and lumber grading

Forestry Equipment

- Common equipment and its purpose
- Equipment safety and inspection
- Basic equipment operation

Chainsaw Safety and Tree Felling^{1, 2, 3}

- Chainsaw mechanics, maintenance, and safety
- Directional felling
- Mechanical advantage

Skills Camp

- Equipment operation
- Tree felling
- Tree identification
- Forest health prescription writing
- Log and lumber grading¹
- Milling and drying

Immersion Program

Tree Identification and Silviculture

- HS Tree ID training
- Forest ecology

Log Grading and Scaling

- HS Forest Products
- Visual merchandising
- Log scaling

Equipment Operation and Maintenance (Nicolet)

- HS Forestry Equipment
- Log loading and transport
- Teardown and repair of small engines
- Equipment maintenance
- Equipment transport
- Safe operation

CDL certification^{1,2}

Pesticide Applicator^{1,3}

- HS forest health training
- Pesticide vs. insecticide

BMPs of Water Quality^{1,3}

- Water quality laws
- Woods road construction and maintenance

GIS/Orienteering

- Intro to GIS
- Avenza Maps
- Map reading and orienteering

Chainsaw Safety and Tree Felling^{1, 2, 3, 4}

- Chainsaw mechanics, maintenance, and safety
- Directional felling
- Mechanical advantage

Apprentice/Degree Programs

Forestry Equipment Maintenance

- Nicolet

Natural Resources Technician

- Nicolet
- Fox Valley Tech
- College of Menominee Nation

Bachelors of Forestry

- UWSP

Key

¹ Certificate bearing

² Tech college credit

³ UWSP credit

⁴ Exempt for HS program participants

Mill Technology Program Overview

Applied High School

Tree Identification

- General tree anatomy/structure
- Dichotomous keys
- Tree ID by leaf and twig
- General silvics of common species

Forest Health

- Identification, management, and control of: invasive species, forest diseases, forest pests, and tree risk

Forest Products

- Types of forest products and services
- Primary and secondary wood products
- Types of lumber
- Wood identification
- Log and lumber grading

Forestry Equipment

- Common equipment and its purpose
- Equipment safety and inspection
- Basic equipment operation

Chainsaw Safety and Tree Felling^{1, 2, 3}

- Chainsaw mechanics, maintenance, and safety
- Directional felling
- Mechanical advantage

Skills Camp

- Equipment operation
- Tree felling
- Tree identification
- Forest health prescription writing
- Log and lumber grading¹
- Milling and drying

Immersion Program

Forest Products⁴

- Types of forest products and services
- Primary and secondary wood products
- Types of lumber
- Wood identification
- Log and lumber grading

OSHA Safety certification¹

Log and Lumber Grading^{1,2}

- HS Forest Products
- Visual merchandising
- Log scaling
- Lumber Grading

Milling and Mill Technology²

- Mill operation
- Basic mill maintenance
- Mill technology

Drying and Kilns²

- Moisture content measuring
- Types of kilns and controls
- Generating kiln schedules and procedures
- Steam kiln operation and maintenance
- Dehumidification kiln operation and maintenance
- Vacuum kiln operation and maintenance

Hardwood Sawing, Edging, Trimming²

- Conversion of logs to lumber
- Opening face and log positioning
- Applying NHLA grading standards
- Upgrading lumber at the trim saw

Saw Maintenance and Filing

- Basic saw maintenance and repair
- Troubleshooting common issues
- Blade sharpening and filing
- Optimizing saw performance

Apprentice/Degree Programs

Wood Science

- Northcentral Tech

Hardwood Manufacturing/Sawmilling

- Northcentral Tech

Bachelors of Forestry

- UWSP

Key

¹ Certificate bearing



² Tech college credit

³ UWSP credit

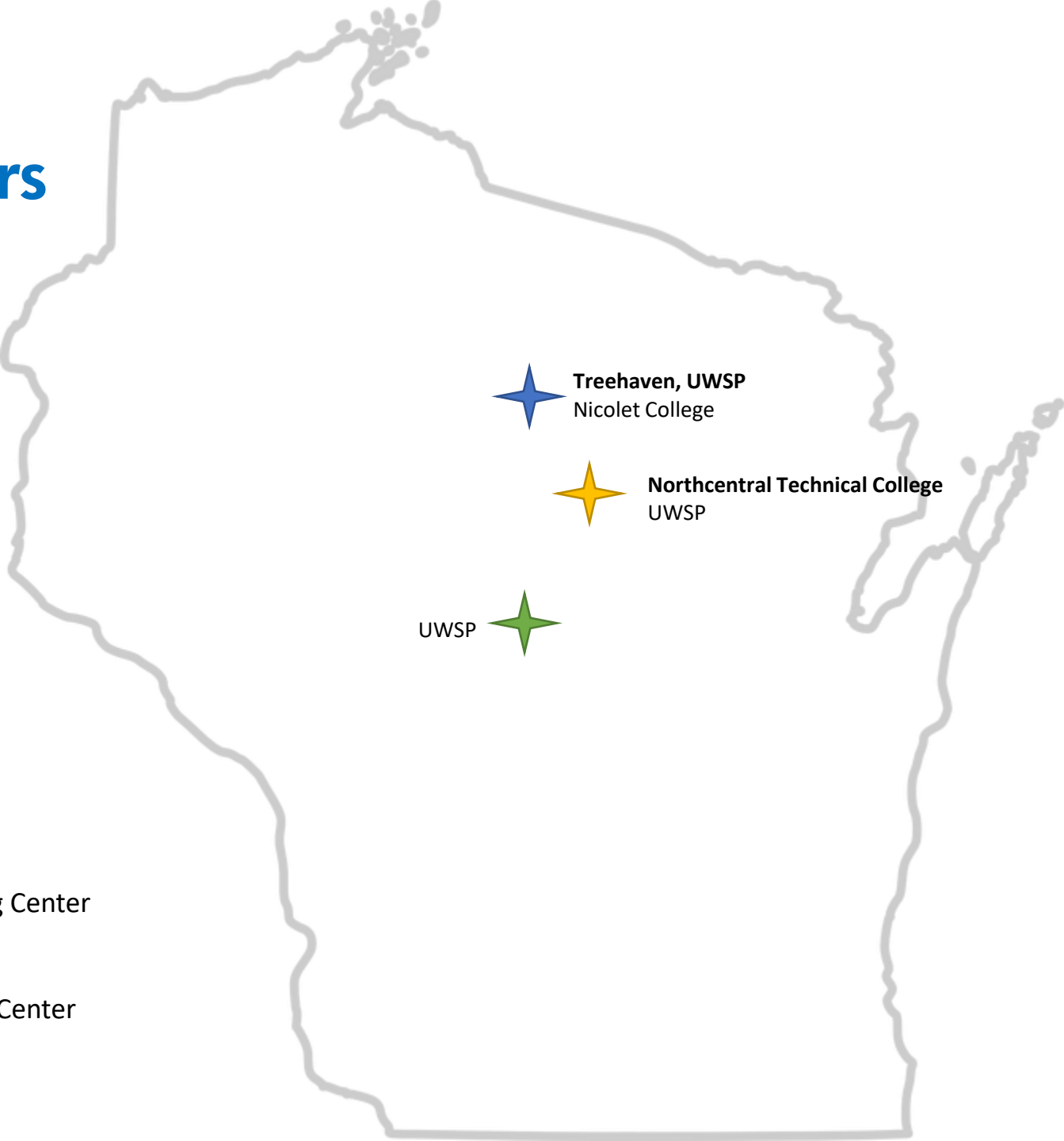
⁴ Exempt for HS program participants

High School Program Hubs



- Key**
-  Forest Operations Hub
 -  Mill Operations Hub

Immersion Training Centers



Treehaven, UWSP
Nicolet College

Northcentral Technical College
UWSP

UWSP

- Key**
- Forest Operation Training Center
 - Mill Technology Training Center



FORward Units
Forestry on the Road Mobile
Education Units



Harvester & Forwarder simulator





FORward units

Forestry on the Road Mobile
Education Units



Grant Partners

None of this would be possible without our partners!

Equipment Manufacturers

- Ponsse North America
- Milwaukee Tool
- Case Construction
- Cleereman Industries
- McDonough Manufacturing

Industry

- Kretz Lumber Company
- Tigerton Lumber Company
- Menominee Tribal Enterprises

Technical Colleges

- Northcentral Technical College
- Nicolet College

State

- WI DNR-Division of Forestry
- LEAF – Wisconsin’s K-12 Forestry Education
- UW-Stevens Point
- University of Wisconsin-Madison, Division of Extension

Regional Economic Development

- Grow North
- New North

High Schools

- Tomahawk High School
- Menominee Indian High School
- Antigo High School
- Merrill High School
- Rhinelander High School

Professional Organizations

- Great Lakes Timber Professionals Association
- Society of American Foresters—Wisconsin Chapter