# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 Introduction</td>
<td>1</td>
</tr>
<tr>
<td>2.0 Purpose</td>
<td>1</td>
</tr>
<tr>
<td>3.0 Scope</td>
<td>1</td>
</tr>
<tr>
<td>4.0 Responsibilities</td>
<td>1</td>
</tr>
<tr>
<td>4.1 Environmental, Health and Safety Supervisor</td>
<td>1</td>
</tr>
<tr>
<td>4.2 Department Managers / Supervisors</td>
<td>1</td>
</tr>
<tr>
<td>4.3 Employee</td>
<td>1</td>
</tr>
<tr>
<td>4.4 Contactors</td>
<td>1</td>
</tr>
<tr>
<td>5.0 Ladder Selection</td>
<td>2</td>
</tr>
<tr>
<td>6.0 Ladder Inspection &amp; Maintenance</td>
<td>2</td>
</tr>
<tr>
<td>7.0 Ladder Work Practices</td>
<td>3</td>
</tr>
<tr>
<td>7.1 Safe Ladder Set-up</td>
<td>3</td>
</tr>
<tr>
<td>7.2 Climbing and Standing on Ladders</td>
<td>3</td>
</tr>
<tr>
<td>7.3 Step Ladder Safety</td>
<td>4</td>
</tr>
<tr>
<td>7.4 Extension Ladder Safety</td>
<td>4</td>
</tr>
<tr>
<td>7.5 Extension Ladder Set-up</td>
<td>4</td>
</tr>
<tr>
<td>7.6 Fixed Ladder Safety</td>
<td>4</td>
</tr>
<tr>
<td>8.0 Ladder Storage</td>
<td>4</td>
</tr>
<tr>
<td>9.0 Training</td>
<td>4</td>
</tr>
<tr>
<td>10.0 Program Evaluation</td>
<td>5</td>
</tr>
</tbody>
</table>

## Appendices

- Appendix A: Ladder Inspection Checklist ........................................................................ 6
- Appendix B: Ladder Safety Program Evaluation Log .......................................................... 7
1.0 Introduction
Waukesha County Technical College recognizes that employees use ladders on a regular basis for a variety of work tasks. Employees should choose an appropriate ladder for each work task and never use chairs, boxes, or other improvised climbing devices. Misuse of ladders can result in serious injuries from falls.

2.0 Purpose
The Ladder Safety Program has been implemented to prevent occupational injuries related to the use of ladders and to be in compliance with Department of Safety and Professional Services (SPS 332.22-.23) and OSHA’s Ladder Safety (29CFR 1910.25-.27).

3.0 Scope
This program covers the minimum requirements for the care and use of ladders used by College employees. Those employees who might be expected to use a ladder during the course of work should be trained on ladder safety. This program covers all types of ladders including step, extension, and fixed ladders. Ladder users must be able to recognize and avoid ladder hazards and be aware of safe practices in setting up, storing, moving, and working from this equipment.

4.0 Responsibilities
The Ladder Safety Program assigns responsibilities to employees, supervisors, and managers.

4.1 Environmental, Health and Safety Department
- Implementation and maintenance of the Ladder Safety Program.
- Conducting Ladder Safety Training.
- Establish ladder inspection guidelines.
- Ensure that employee training records are properly maintained.

4.2 Department Managers / Supervisors
- Provide the appropriate type(s) of ladders in each department.
- Provide ladder safety training for all employees who use ladders.
- Ensure that ladders are inspected at predetermined intervals.
- Ensure that ladders are removed from service and properly disposed of if found to be defective.
- Ensure that ladder safety requirements are being followed by the employees.

4.3 Employees
- Attend ladder safety training program.
- Comply with the requirements of this program.
- Inspect ladders for defects or possible hazards prior to use.
- Tagging any defective ladder as out of service and reporting defects to their supervisor.

4.4 Contractors
- Comply with the requirements of this program.
- Inspect ladders for defects or possible hazards prior to use.
- Reporting defective ladders to the Facilities department.
5.0 Ladder Selection
Department Managers are responsible for selecting and providing the appropriate type(s) of ladders in each department. Ladders shall be OSHA approved and appropriately rated for the task being performed and the load (person and material) on the ladder.

Employees should be made aware that ladders have different weight capacities. ANSI requires that a duty rating sticker must be placed on the side of a ladder. When selecting a ladder, the employee must verify that the combined weight of the user and material falls within the duty rating.

The ladder duty ratings are as follows:
- Type IA (Extra Heavy Duty Industrial): 3 to 20 feet for extra heavy duty; 300 pounds load capacity
- Type I (Industrial): 3 to 20 feet for heavy duty; 250 pounds load capacity
- Type II (Commercial): 3 to 12 feet for medium duty; 225 pounds load capacity
- Type III (Household): 3 to 6 feet for light duty; 200 pounds load capacity

Employees should choose a ladder of the correct length to do the job. A ladder that is too long or too short will force the user to overreach, adversely affecting their balance.

When considering what length of ladder to use for a job, employees must keep in mind that the ladder length and the maximum working length (extension ladders) or highest standing level (stepladders) are not the same.

The highest permitted standing level on a stepladder is two steps down from the top. An employee standing higher may lose their balance and fall. An employee's maximum safe reaching height is approximately 4' higher than the height of the ladder. For example, a typical person can safely reach an 8' ceiling on a 4' ladder.

Extension ladders should extend at least 3 rungs above the highest support or contact point, which may be the wall or roof line. This will allow enough length for proper setup, overlap of ladder sections, height restrictions of the highest standing level, and where appropriate, the extension of the ladder above the roof line. The highest standing level is four rungs down from the top.

Do not use conductive ladders for any electrical work or other tasks in the vicinity of energized electrical lines.

6.0 Ladder Inspection & Maintenance
Employees should inspect ladders for possible defects or hazards prior to each use. Ladders should be inspected by a competent inspector annually and after any incident that could affect its safe use. The inspector performing the inspection should complete the Ladder Inspection Checklist. The Ladder Inspection Checklist is found in Appendix A of this program.

Inspections should cover the following points:
- Parts shall be free of sharp edges, splinters, cracks, slivers or dents that would compromise structural integrity.
- Joints between the steps/rungs and sides must be tight. Rungs should not move when twisted by hand.
- Hardware and fittings shall be securely attached.
- Moveable parts must operate freely (lubricate, if necessary), but without undue play.
- Rope, if present, must be replaced if frayed or badly worn.
Ladder Safety

- Safety feet / pads shall non-slip, insulated, in place and unbroken.
- Rungs/steps shall be free of grease, oil, or other slippery substances. Remove any buildup of dirt or mud, as well. Rungs must be corrugated, knurled, dimpled, or coated with a slip-resistant material.
- No rungs/steps shall be missing or defective.
- Ladders may not be painted or coated with any material that might hide defects. Labels should be placed on only one face of side rails.
- Step ladders must have a metal spreader or locking device of sufficient size and strength to securely hold the ladder in an open position. Any sharp points on the spreader must be covered or removed.

Ladders should be maintained in good condition at all times. Defective ladders shall be removed from service immediately and marked with a tag reading "DANGEROUS - DO NOT USE!" The Environmental, Health and Safety Supervisor should determine whether a defective ladder will be repaired or replaced. Any repairs must comply with DSPS and OSHA specifications.

Completed Ladder Inspection Checklists shall be forwarded to the Environmental, Health and Safety Office (C-210D). The Environmental, Health and Safety Office will be responsible for maintaining completed Ladder Inspection Checklists for 3 years.

7.0 Ladder Safety Work Practices

7.1 Safe Ladder Setup
- All ladders must be placed on firm ground.
- Do not set ladders on boxes, blocks or other objects that might move.
- Do not lean or reach out while standing on ladders.
- Position the ladder so that the side rails extend at least 3 feet above the landing. Secure the side rails at the top to a rigid support and use a grab device when 3 foot extension is not possible.
- Portable ladders should be used so that the base is a distance from the vertical wall equal to one-fourth the working length of the ladder.
- Do not use ladders in high wind or during inclement weather conditions.
- Never use metal ladders near exposed electrical wires.
- Never set up ladders in front of or around doors, unless the door is posted and blocked, guarded, or locked.

7.2 Climbing and Standing on Ladders
- Use safety shoes or other rubber sole shoes when climbing a ladder.
- Make sure shoes are free of mud, grease, or anything slippery.
- Always face a ladder when climbing up or down.
- Use at least one hand to grasp the ladder when climbing. Maintain at least three points of contact with the ladder (two feet and one hand or two hands and one foot).
- Avoid carrying materials or tools when climbing a ladder.
- Only one person should be on a ladder at one time.
- Climb the ladder first then pull up the materials with a rope.
- Rungs and steps should be clear of grease, oil, wet paint, snow, and ice before climbing.
- Do not climb onto a ladder from the side.
- Do not slide down a ladder.
- Climb or stand on a ladder with your feet in the center of the rung; do not overreach or
Ladder Safety

- Do not move, shift, or extend ladders while in use.
- Never sit on a ladder.

7.3 Step Ladder Safety
- Never use a stepladder over 20 feet in length.
- Always open a stepladder completely and make sure the spreader is locked before use.
- Do not stand higher than the second step from the top of a step ladder.
- Do not straddle a stepladder.

7.4 Extension Ladder Safety
- The sections of an extension ladder should overlap enough to retain the strength of the ladder.
- Never splice or tie two short ladders together.
- When using a ladder for access to a landing, it must extend 3 feet above the landing.
- The top of an extension ladder should rest against a flat, firm surface.
- Elevate and extend these extension ladders only from the ground.
- When practical, secure extension ladders at both the base and the top.

7.5 Extension Ladder Setup
- Lay the ladder on the ground when it is collapsed.
- Have someone foot the ladder or make sure it is braced against something.
- Starting at the top, lift the ladder over your head and walk under the ladder moving your hands rung to rung as you go.
- When the ladder is vertical and the top touches the wall, pull the base out so that the distance from the wall is one-fourth the height to the point of support.
- If possible, tie the ladder off or have someone steady the ladder as you climb it.

7.6 Fixed Ladder Safety
- Fixed ladders must be secured to the object they are attached to.
- Fixed ladders over 20 feet must have a safety cage surrounding the ladder.
- The safety cage should have 15” clearance to all points from the center.
- Defects in fixed ladders should be repaired as soon as possible.
- When a defect is not repairable the ladder must be taken out of service.

8.0 Ladder Storage
When not in use, ladders should be stored in a designated location out of direct sunlight and not exposed to harmful elements that may cause damage. Never store materials on a ladder. Ladders should be secured when stored to prevent from falling over or tipping which could injure employees in the area. In addition, ladders must be secured when in transit.

9.0 Training
Those employees who might be expected to use a ladder during the course of work should be trained on ladder safety. Employees should be trained in the following:
- The proper use and placement of ladders.
- The maximum intended load capacities of ladders used.
- The inspection, safe climbing procedures, and storage of ladders.
- The recognition of possible hazards associated with ladder use, maintenance, and safety precautions.
Employees should be retrained as necessary to maintain their understanding and knowledge on the safe use of ladders.

**10.0 Program Evaluation**
The Environmental Health and Safety Supervisor is responsible for reviewing the Ladder Safety Program, its effectiveness and updating as needed. Any updates or changes as a result of the evaluation will be documented in the Program Evaluation Log (Appendix B).
Appendix A
Ladder Inspection

Waukesha County Technical College
Ladder Inspection Checklist

Inspector: ___________________________ Date: ______________
Ladder ID#: ________________________ Assigned Location / Building: ______________________
Type of Ladder: _______________________ 

If a ladder is determined to be defective it shall be removed from service immediately, marked with a tag reading “DANGEROUS - DO NOT USE” and the Environmental, Health and Safety Office shall be notified.

<table>
<thead>
<tr>
<th>Compliant</th>
<th>Requirement</th>
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<tbody>
<tr>
<td>Yes</td>
<td>Ladders shall be free of sharp edges, splinters, cracks, slivers or dents that would compromise structural integrity.</td>
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<td>No</td>
<td>Joints between the steps/rungs and sides must be tight. Rungs should not move when twisted by hand.</td>
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<td>Rope, if present, must be replaced if frayed or badly worn.</td>
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<td>Safety feet / pads shall non-slip, insulated, in place and unbroken.</td>
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Ladder Disposal Date: ___________________________

Comments: ____________________________________

Forward completed checklist to the Environmental, Health and Safety Office (C-210D)
Appendix B
Ladder Safety Program Evaluation Log

Waukesha County Technical College will review and update each section of the Bloodborne Pathogen Exposure Control Plan as needed on an annual basis. The last 3 years of program evaluations will be entered and maintained in the table below.

<table>
<thead>
<tr>
<th>Date</th>
<th>Evaluator</th>
<th>Updates / Changes</th>
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<td>4/30/13</td>
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<td>Ladder Safety Program released</td>
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