

# Risk Assessment Guidance Document

## Overview

Supervisors have a general duty to ensure the health and safety of their workers. The purpose of carrying out a risk assessment is to enable supervisors to take the measures necessary to meet this requirement. A risk assessment provides an opportunity to actively think about all the foreseeable hazards associated with a task and the risks associated to those hazards. This information is then used to establish controls to minimize risk and a check-in procedure.

## General Procedure

These steps are to be completed by the supervisor:

1. Identify all personnel carrying out the task/group of similar tasks.
2. Conduct a Risk Assessment for the specific task or group or similar tasks. The objective of the hazard and risk assessment is to determine the hazards and risks associated with conducting the task(s).
  - Note: The risk assessment should be based on what is reasonably anticipated for that workplace for work activity. A single assessment can be completed for either one worker or a group of workers who perform the exact same tasks; however, if at any time, there is a change in location, timing, equipment, environment or any other factor that could affect the worker's safety, a new risk assessment will be required and changes to the safe work procedure may be necessary.
3. Develop a safe check-in procedure using the template provide on page 2 of the assessment.
4. Submit the completed risk assessment and check in procedure to the department head and to HR to have a copy placed in the employee file.
5. Train all applicable workers on safe work procedures and document that the training has been completed.
6. Ensure documented training records are readily available indicating that the worker has been trained in the task/procedure that will be carried out.

## Instructions for completing the Risk Assessment:

In the Selkirk College Risk Assessment Template, complete the "Names and Contact Information" form and the associated Risk Assessment Table with the aid of the supporting documentation provided in the Appendices of this document: Risk Assessment Guidance Document.

1. Identify the hazards that are present. Use Appendix A: Definitions and Appendix B: Examples of hazards in the workplace as guidance.
2. Provide more details about the hazard and possible outcomes in Columns B and C.
3. Use Appendix C: Risk Assessment Elements to determine the Severity and Probability for each hazard. Do not take into account controls that will be used when determining the severity and probability. Use this information to complete Columns C and D.

4. Complete Columns F and H using the drop down lists.
5. The risk score will auto populate and will also trigger the Check-in required field to auto populate.
6. If further controls are to be put in place please list in Column K.
7. Click on Page 2 Check in Procedures and complete all fields that did not auto populate.

## Appendix A: Definitions

**Administrative Controls** - The modification of work processes or activities to minimize risk

**Engineering Controls** - The modification of the physical work environment to minimize risk

**Hazard** - A potential source of harm to a person that can lead to a risk of injury or occupational disease

**Risk** - The chance of injury or occupational disease

**Risk Assessment** - The process where hazards are identified, their risk evaluated, and controls for the risk are determined to eliminate the hazard or minimize the risk

**Supervisor** - Refers to the person directly responsible for overseeing the tasks of the worker

**Violence in the Workplace** - Attempted or actual exercise by a person, other than a worker, of any physical force so as to cause injury to a worker and includes any threatening statement or behavior which gives a worker reasonable cause to believe that he or she is at risk of injury

**Worker** - Refers to all employees of Selkirk College including faculty, staff, and paid students

**Working Alone** - Working in circumstances where assistance would not be readily available to the worker in case of an emergency or in case the worker is injured or in ill health

## Appendix B: Examples of Hazards in the Workplace

The tables below provides generic examples of workplace hazards within each of the five categories. This is not an exhaustive list and the supervisor is responsible for listing the detailed site specific hazards.

### Biological Hazards:

Biological hazards are organisms or substances produced by organisms that may pose a threat to human health and safety. Biological hazards include exposure to:

• Allergens	• Bodily Fluids	• Microorganisms
• Animals	• Insects	• Waste (Human or Animal)
• Blood	• Plants	• Bites from Insects or Animals

Note: Consider items like is it infectious? Is it poisonous?

### Chemical Hazards:

Chemical hazards are substances which, because of its characteristics and effects, may cause harm to human health and safety. Chemical hazards can be broke down to include exposure to: vapours, gasses, mists, dusts, fumes and smoke. Examples of chemical hazards include exposure to:

• Compressed Gases	• Corrosives	• Flammables
• Cytotoxic substances	• Carcinogenic	• Oxidizers
• Pressurized containers	• Pesticides	• Toxic
• Explosive	• Fumes	• Lead

Note: When identifying chemical hazards in your Risk Assessment, detail exact chemical names as they pertain to the hazard (e.g. Instead of writing "Flammables", write "Acetone" as the hazard)

### Ergonomic Hazards:

Ergonomic Hazards arise when the interaction between the work and the worker is not ideal. They cause harm to the musculoskeletal system. Examples of ergonomic hazards are:

• Repetitive movements	• Using too much force	• Awkward postures
• Frequent lifting	• Sustained/static postures	• Contact stress

Appendix B: Examples of Hazards in the Workplace (con't)

**Physical Hazards:**

Physical hazards can cause injury to workers when an object, piece of equipment or material comes into contact with the worker though direct contact is not always necessary. Physical hazards are often associated with an uncontrolled source of energy; kinetic, electrical, pneumatic, hydraulic, etc.

Examples of physical hazards are:

<b><i>Environment</i></b>	<b><i>Equipment</i></b>	<b><i>Miscellaneous Physical Hazards</i></b>
• Hot Temperatures	• Fast moving equipment	• Arc Flash
• Cold Temperatures	• Exposed moving parts	• High Voltage
• Humidity Extremes	• Mobile equipment	• Electromagnetic Fields
• Exposure to sunlight (heat stress, sun exposure)	• Powered Equipment	• Electricity
• Terrain (uneven, slippery, etc.)	• Pinch Point	• Working at Heights
• Extreme Weather (land) (e.g. strong winds, rain, fog etc.)	• Nip Point	• Confined Space
• Wildlife (e.g. aggressive nature etc.)	• Sharp Edges	• Asbestos
• Fire	• Ladder Use	• Overhead hazards
• Entanglement	• Vibration	• Radiation (open or sealed source, ionizing or non-ionizing)
• Engulfment		• Nearby road Traffic
• Muddy environment		
• Lighting		
• Noise		
• Cliffs/Mountains		

Note: When identifying physical hazards, detail the source of the hazard where applicable along with the nature of the hazard (high pitched, continuous, glare, dim), exact equipment that is used and useful detail.

**Psychosocial Hazards**

• Violence in the Workplace	• Workplace Conduct	• Stress
• Bullying	• Threatening Behavior	

## Appendix C: Risk Assessment Elements

Use the table below to determine the severity and probability for each hazard identified in Table 1. Document the results in Table 1 above.

Severity:	In order to determine the Severity, consider the following items:
<ul style="list-style-type: none"> <li>• Extreme (Fatality)</li> </ul>	<ul style="list-style-type: none"> <li>• What are the possible consequences?</li> <li>• What is the possible severity of the harm?</li> <li>• Presence of others: Are other people in the vicinity?</li> <li>• Awareness: Will others capable of providing assistance be aware of the worker's needs?</li> <li>• Willingness: Is it reasonable to expect others to provide assistance?</li> <li>• Timeliness: Will assistance be provided within a reasonable time period? (Consider access to first aid, and emergency services)</li> </ul>
<ul style="list-style-type: none"> <li>• Major (Permanent Disability)</li> </ul>	
<ul style="list-style-type: none"> <li>• Moderate (Requiring Medical Treatment)</li> </ul>	
<ul style="list-style-type: none"> <li>• Minor (Minor cuts, bruises, irritation)</li> </ul>	
Probability	In order to determine the Probability consider the following items:
<ul style="list-style-type: none"> <li>• Very likely (Continuously or many times daily)</li> </ul>	<ul style="list-style-type: none"> <li>• How likely are the consequences to occur?</li> <li>• Have such incidents occurred in the past?</li> <li>• Is the incident common in this field of work?</li> <li>• How frequent is the exposure to the hazard?</li> <li>• Is the task repeated many times each shift?</li> <li>• How long are workers exposed to the hazard? The longer the exposure, the higher the risk</li> </ul>
<ul style="list-style-type: none"> <li>• Likely (from once per day to once per month)</li> </ul>	
<ul style="list-style-type: none"> <li>• Moderate (from once per month to once per year)</li> </ul>	
<ul style="list-style-type: none"> <li>• Unlikely (it has been known to occur)</li> </ul>	
<ul style="list-style-type: none"> <li>• Rare (not known to have occurred, but considered remotely possible)</li> </ul>	

## Appendix D: Hierarchy of Controls

For each hazard, after determining the risk level, consider the following to aid in developing appropriate controls. Identify controls that will be used in Table 1: Risk Assessment.

<b>1. Can the hazard be eliminated?</b>	<b>Yes</b>	<b>No</b>
a) Can the task be avoided? Does the task need to be done to achieve the desired result?	<input type="checkbox"/>	<input type="checkbox"/>
b) Can the hazardous part of the task be removed?	<input type="checkbox"/>	<input type="checkbox"/>
c) Can it be done in a way so workers are not exposed to the hazard?	<input type="checkbox"/>	<input type="checkbox"/>
<b>2. Can substitution produce a less hazardous situation?</b>	<b>Yes</b>	<b>No</b>
a) Can a different machine or tool be used?	<input type="checkbox"/>	<input type="checkbox"/>
b) Can less hazardous materials be substituted to reduce risk?	<input type="checkbox"/>	<input type="checkbox"/>
c) Can work practices be developed to reduce exposure to hazard?	<input type="checkbox"/>	<input type="checkbox"/>
<b>3. Can an engineering control be used?</b>	<b>Yes</b>	<b>No</b>
a) Can the hazard be controlled at its source (e.g. local ventilation)	<input type="checkbox"/>	<input type="checkbox"/>
b) Can the hazard be enclosed (e.g. noise control)?	<input type="checkbox"/>	<input type="checkbox"/>
c) Can a physical barrier be provided (e.g. guarding)?	<input type="checkbox"/>	<input type="checkbox"/>
<b>4. Can an administrative control be used?</b>	<b>Yes</b>	<b>No</b>
a) Can work be scheduled to reduce individual exposure? (e.g. providing regular breaks, rotating work assignments)	<input type="checkbox"/>	<input type="checkbox"/>
b) Can the workplace be reorganized to provide distance between hazard and workers?	<input type="checkbox"/>	<input type="checkbox"/>
c) Can susceptible workers (e.g. to certain chemicals) be transferred to other duties?	<input type="checkbox"/>	<input type="checkbox"/>
d) Are training and safe work procedures required and available?	<input type="checkbox"/>	<input type="checkbox"/>
<b>5. Can personal protective equipment be used?</b>	<b>Yes</b>	<b>No</b>
a) Is PPE provided?	<input type="checkbox"/>	<input type="checkbox"/>

## Appendix E: Examples of Controls

Controls can be placed at the source, along the path or at the worker. This is not an exhaustive list and the supervisor is responsible for identifying the detailed hazard specific controls.

### Engineering Controls

Engineering controls are methods that are built into the design of a plant, equipment or process to minimize the hazard. Engineering controls are a very reliable way to control worker exposures as long as the controls are designed, used and maintained properly. Three types of engineering controls are: Process control, enclosure and/or isolation of emission source, and ventilation. Examples within each category are listed below:

<b><i>Process Control</i></b>	<b><i>Enclosure and Isolation</i></b>	<b><i>Ventilation</i></b>
<ul style="list-style-type: none"> <li>Using a wet method rather than a dry method</li> </ul>	<ul style="list-style-type: none"> <li>Glove boxes</li> </ul>	<ul style="list-style-type: none"> <li>Fume hood</li> </ul>
<ul style="list-style-type: none"> <li>Mechanical transportation not manual</li> </ul>	<ul style="list-style-type: none"> <li>Remote controlled devices</li> </ul>	<ul style="list-style-type: none"> <li>Biological Safety Cabinet</li> </ul>
<ul style="list-style-type: none"> <li>Guards</li> </ul>		

### Administrative Controls

Administrative controls are the modification of work processes or activities to minimize risk. Some examples of administrative controls are listed below:

<ul style="list-style-type: none"> <li>Signs/Labels</li> </ul>	<ul style="list-style-type: none"> <li>Restricting Access to a work area</li> </ul>	<ul style="list-style-type: none"> <li>Job rotation schedules to limit time an individual worker is exposed</li> </ul>
<ul style="list-style-type: none"> <li>Completion of training on Safe Work Procedure</li> </ul>	<ul style="list-style-type: none"> <li>Restricting task to only those competent or qualified to perform the work</li> </ul>	<ul style="list-style-type: none"> <li>Using a work-rest schedule that limits the length of time a worker is exposed</li> </ul>
<ul style="list-style-type: none"> <li>Completion of RMS online general safety courses</li> </ul>	<ul style="list-style-type: none"> <li>Scheduling maintenance and high exposure when few workers are present</li> </ul>	

### Personal Protective Equipment (PPE) Controls

This is the last line of defense as PPE does not remove the hazard in any way but instead serves as a barrier between the worker and the hazard. Some examples of PPE are listed below:

<ul style="list-style-type: none"> <li>Safety Glasses</li> </ul>	<ul style="list-style-type: none"> <li>Respirator</li> </ul>	<ul style="list-style-type: none"> <li>Steel toed boots</li> </ul>
<ul style="list-style-type: none"> <li>Safety Goggles</li> </ul>	<ul style="list-style-type: none"> <li>Hard hat</li> </ul>	<ul style="list-style-type: none"> <li>Laboratory Coat</li> </ul>
<ul style="list-style-type: none"> <li>Face Shield</li> </ul>	<ul style="list-style-type: none"> <li>Gloves (Indicate the material)</li> </ul>	