St. Lawrence College
Position Description Form (PDF)

Effective Date: September 11, 2023

Updated: October 24, 2023

Campus:	**Cornwall**
Incumbent's Name:	**Vacant**
Position Title:	**Trades Technologist**
Payband:	**H**
Position Number:	**00000436**
NOC Code:	
Hours per Week:	**35**
Supervisor's Name and Title:	**Manager, Academic Labs - Technology and Trades**

Completed by:

Signatures:

Incumbent: _____ Date: _____
(Indicates the incumbent has read and understood the PDF)

Supervisor: _____ Date: _____

One-Over-One: _____ Date: _____

Instructions for Completing the PDF

1. Read the form carefully before completing any of the sections.

2. Answer each section as completely as you can based on the typical activities or requirements of the position and not on exceptional or rare requirements.

3. If you have any questions, refer to the document entitled "A Guide on How to Write Support Staff Position Description Forms" or contact your Human Resources representative for clarification.

4. Ensure the PDF is legible.

5. Responses should be **straightforward and concise using simple factual statements.**

Position Summary

Provide a concise description of the overall purpose of the position.

Reporting to the Manager, Academic Labs - Technology and Trades, and in consultation with skilled trades faculty (e.g., Welding, Carpentry, Automotive, the incumbent will provide the faculty with technical support and safety oversight to meet learning outcomes of skilled trades programs. Duties of the incumbent include repairs and maintenance of equipment, tools, and supplies in the shops. The incumbent maintains inventory of the aforementioned items, orders new items, receives items, and disposes of items in accordance with the college's Procurement Policies & Procedures and other departmental procedures. Incumbent provides support to students on an as-needed basis. Incumbent has responsibilities for the health and safety of the learning spaces as well as - Safe Work Procedures as they relate to the equipment and spaces.

Duties and Responsibilities

Indicate as clearly as possible the significant duties and responsibilities associated with the position. Indicate the approximate percentage of time for each duty. Describe duties rather than detailed work routines.

	Approximate % of the Time Annually*
1. TECHNICAL SUPPORT • Sets up, demonstrates, and supervises students in the operation and application of shop equipment in the welding, carpenter, mechanical, electrical, and automotive shop ensuring proper operational procedures and safety precautions are employed. Includes the authority to ask students to leave shop areas for unsafe behavior. Assists students and faculty with technical problems related to demonstrations, projects, and tests. Assists students in understanding the application of the theory they are learning outside the shop. • Reports unsafe student behaviour, incidents, and near-misses to manager and Health and Safety Officer. • Assists in the design, construction and testing of equipment, experiments and projects requiring specialized skills and knowledge. May include needs assessment.	40%
• **REPAIRS / MAINTENANCE / SAFETY** Maintains equipment in welding, automotive, electrical, mechanical and carpentry shops including the following tasks: • Regular cleanup of lab equipment and space. • Scheduling and documenting regular preventative maintenance routines. • Making minor repairs, adjustments and/or calibrations as quickly as possible to minimize downtime; • Working collaboratively with other technical experts to facilitate repairs outside of position expertise (may involve researching tender specifications or code requirements). • Prepares written manuals/work instructions, as required, for the safe and effective operation of equipment. • Inspects and maintains health and safety equipment, such as eye wash stations, safety showers, and first aid kits. • Works with the Manager and faculty to ensure that a safe working environment exists at all times. • Reports unsafe worker behaviour, incidents, and near-misses to manager. • Specific responsibility for updating Material Safety Data Sheets and meeting workplace safety requirements.	40 %
2. PURCHASING / INVENTORY CONTROL • Maintains accurate inventory of all equipment and supplies in shops. • Issues equipment and supplies to faculty according to established procedures. • Orders supplies and equipment to support lab activities in accordance with Procurement Policies & Procedures. • Reviews and approves acceptance of incoming supplies. • Operating a forklift to move materials and equipment after they have been delivered • Maintains accurate records and copies of sales and shipping documentation, in coordination with Shipping and Receiving. • Following up with vendors and suppliers to troubleshoot orders, quotations, and invoices. • Facilitate the registration of new vendors with the Procurement department. • Work closely with Manager, Academic Operations, on all purchasing activities.	15%
3.	5%

• Assists with Open Houses, Skills Competitions, community outreach and other marketing ventures. • Performs other related duties as assigned.	
	100%

* To help you estimate approximate percentages:

½ hour a day is 7%	1 hour a day is 14%	1 hour a week is 3%
½ day a week is 10	½ day a month is 2%	1 day a month is 4%
1 week a year is 2%		

1. Education

A. Check the box that best describes the **minimum** level of **formal** education that is required for the position and specify the field(s) of study. Do not include on-the job training in this information.

☐ Up to High School or equivalent	☐ 1 year certificate or equivalent	☐ 2 year diploma or equivalent
☒ Trade certification or equivalent	☐ 3 year diploma/degree or equivalent	☐ 3 year diploma / degree plus professional certification or equivalent
☐ 4 year degree or equivalent	☐ 4 year degree plus professional certification or equivalent	☐ Post graduate degree or (e.g. Masters) or equivalent
☐ Doctoral degree or equivalent		

Field(s) of Study:

Certificate of Qualification in a skilled trade such as Automotive Service Technician, Industrial Mechanic Millwright, Electrician, Welder, General Machinist

B. Check the box that best describes the requirement for the specific course(s), certification, qualification, formal training, or accreditation in addition to and not part of the education level noted above and in the space provided specify the additional requirement(s). Include only the requirements that would typically be included in the job posting and would be acquired prior to the commencement of the position. Do not include courses that are needed to maintain a professional designation.

☒ No Additional requirements	
☐ Additional requirements obtained by course(s) of a total of 100 hours or less	
☐ Additional requirement obtained by course(s) of a total between 101 and 520 hours	
☐ Additional courses obtained by course(s) of more than 520 hours	

2. Experience

Experience refers to the minimum time required in prior position(s) to understand how to apply the techniques, methods, and practices necessary to perform this job. This experience may be less than experience possessed by the incumbent, as it refers only to the minimum level required on the first day of work.

Check the box that best captures the typical number of years of experience, in addition to the necessary education level required to perform the responsibilities of the position and, in the space provided, describe the type of experience. Include any experience that is part of a certification process, but only if the work experience or the on-the-job training occurs after the conclusion of the educational course or program.

☐ Less than one (1) year	
☐ Minimum of one (1) year	
☐ Minimum of two (2) years	
☐ Minimum of three (3) years	
☒ Minimum of five (5) years	Experience with electronic, digital, and pneumatic/hydraulic instruments. Experience with office software including Microsoft Outlook, OneDrive, Teams, Excel, Word.
☐ Minimum of eight (8) years	

3. Analysis and Problem Solving

This section relates to the application of analysis and judgment within the scope of the position.

The following charts help to define the level of complexity involved in the analysis or identification of situations, information or problems, the steps taken to develop options, solutions or other actions and the judgment required to do so.

Please provide up to three (3 examples of analysis and problem solving that are regular and recurring and, if present in the position, up to two (2) examples that occur occasionally:

	#1 regular & recurring
Key issues or problems encountered.	Equipment not working properly.
How is it identified?	Machine will not cut metal properly as identified by faculty or students
Is further investigation required to define the situation and/or problem? If so, describe.	Check to see if equipment is appropriate for task Check to see if equipment is being operated in accordance with the manufacturer's procedures. Check to see if equipment is damaged or a risk to health and safety
Explain the analysis used to determine a solution(s) for the situation and/or problem.	Start with most obvious problem and solution and then work through a checklist of possible solutions, Visual inspection to identify problem area, If solution is within position's expertise, then incumbent proceeds with solution, otherwise incumbent refers problem and recommendation for solution to supervisor.
What sources are available to assist the incumbent in finding solution(s)? (e.g., past practice, established standards, or guidelines.)	Operating manuals, Past practices, Coordinator or Manager

3. Analysis and Problem Solving

	#2 regular & recurring
Key issues or problems encountered.	Repair, alter or redesign and fabrication of components or parts for a specific project or equipment
How is it identified?	Program faculty / manager can request solution
Is further investigation required to define the situation and/or problem? If so, describe.	Incumbent will meet with requesters to obtain clear understanding of problems and scope of project.
Explain the analysis used to determine a solution(s) for the situation and/or problem.	Involves the identification and breakdown of the facts and components of the problem situation. Systematically determines the most appropriate solution considering cost (budget), urgency, timing, and appropriateness of solution. May have to confirm design, cost, and delivery expectations as well as alternative solutions with coordinator or manager
What sources are available to assist the incumbent in finding solution(s)? (e.g., past practice, established standards, or guidelines.)	Past practices, College policies and procedures, Budget constraints, Relies on own expertise and if necessary, confers with external experts, coordinator, or manager.

	#3 regular & recurring
Key issues or problems encountered.	Sometimes parts to repair machinery are not obtainable because they no longer exist. Some machinery is old and manufacturers or suppliers are not in business. The challenge or problem is to locate suitable parts, either new or used, to keep the piece of equipment operational. Sometimes the part may have to be fabricated.
How is it identified?	Supplies or parts are not obtainable from regular suppliers because they no longer exist. Machine parts nonexistent.
Is further investigation required to define the situation and/or problem? If so, describe.	Check out alternative suppliers for machine parts. It is the machine part that can be made with existing machinery and incumbent experience. Cross border inquiries (USA) may have to be made.
Explain the analysis used to determine a solution(s) for the situation and/or problem.	Is the piece of equipment necessary? Is the problem repairable or should it be replaced? Delivery time or availability of item(s)? Cost and budget constraints, a determining factor. Discuss options with coordinator or manager to determine best course of action
What sources are available to assist the incumbent in finding solution(s)? (e.g., past practice, established standards, or guidelines.)	Researching the internet to find a product that will work (communication with suppliers or companies), suppliers turn around time for delivery. Standard purchasing practices, incumbent knowledge of existing suppliers.

3. Analysis and Problem Solving

	#1 occasional (if none, please strike out this section)
Key issues or problems encountered.	Exhaust system not functioning correctly in welding shop
How is it identified?	Students or faculty complaining of poor air quality, welling lab full of welding smoke.
Is further investigation required to define the situation and/or problem? If so, describe.	Visual inspection and air quality check would identify that system not exhausting welding smoke or other airborne partials as per manufacturer's specifications.
Explain the analysis used to determine a solution(s) for the situation and/or problem.	Check all filters (pre, after, and electrostatic) for damage due to foreign partials plugging them. Check motor and fan drive belt for proper tension. Check exhaust ducts for obstructions and make repairs as required,
What sources are available to assist the incumbent in finding solution(s)? (e.g., past practice, established standards, or guidelines.)	The use of system manual, past practices, consultation with manufacturers of system, and consultation with physical resources such as college's Facilities Management Services.

4. Planning/Coordinating

Planning is a proactive activity as the incumbent must develop in advance a method of acting or proceeding, while coordinating can be more reactive in nature.

In the following charts, provide up to three (3) examples of planning and/or coordinating that are regular and recurring to the position, up to two (2) examples that occur occasionally:

	#1 regular and recurring
List the project and the role of the incumbent in this activity.	Purchasing of welding and machine shop supplies (gas, metal, tooling, cutters, and other general supplies.
What are the organizational and/or project management skills needed to bring together and integrate this activity?	The incumbent must track inventory and forecast/anticipate when supplies will run out, what supplies are to be purchased and how soon. Purchasing supplies at a reasonable cost, keeping in mind budget constraints. Supplier's ability to make supplies available when required. This requires scheduling, record keeping, coordinating, communication, researching, and time management skills
List the types of resources required to complete this task, project, or activity.	Supplier and incumbent communication, company manuals and catalogues, intranet services. College's Procurement Policies & Procedures.
How is/are deadline(s) determined?	Deadlines are determined by student needs and in consultation with faculty members, need for maintenance supplies, past practices with regards to planned purchases of supplies for courses offered in the upcoming semester.
Who determines if changes to the project or activity are required? Who determines whether these changes have an impact on others? Please provide concrete examples.	Incumbent checks on a regular basis the stock of materials and supplies. Overstocking is checked to eliminate overspending on non-necessary items. Higher authority may be necessary for exceptional cases. (More costly materials or supplies to complete project).

4. Planning/Coordinating

	#2 regular and recurring
List the project and the role of the incumbent in this activity.	Exhaust system in welding shop. The system must be completely cleaned (vacuum system and wash and de-clog filters), adjust motor and fan belts, and test system.
What are the organizational and/or project management skills needed to bring together and integrate this activity?	Scheduling, time management and coordinating skills are required to complete required work when welding shop is available for at least one full day. Shut the system down for period of time to adequately clean the system. Required good organizational and coordinating skills to have all item needed for this job available for use and help available if needed
List the types of resources required to complete this task, project or activity.	Past experience, utilize a qualified electrician if electrical or electronic parts are needed. College's Facilities Management Services.
How is/are deadline(s) determined?	System must be operating adequately when students are in the shop. System cleaning and maintenance are usually done in the spring and summer to eliminate the system having major problems or downtime during the school year.
Who determines if changes to the project or activity are required? Who determines whether these changes have an impact on others? Please provide concrete examples.	This activity is the incumbent's responsibility. This activity must be done in the event that the system malfunctions immediately. The scheduling of this activity may have to be done in off hours to eliminate the cancellation of classes.

	#3 regular and recurring
List the project and the role of the incumbent in this activity.	Planned summer maintenance in the machine shop, millwright, and welding shop areas. Organizing, cleaning, repairing, and adjusting machinery and other apparatus.
What are the organizational and/or project management skills needed to bring together and integrate this activity?	The incumbent requires good scheduling, coordinating, and planning skills to schedule day-to-day work to complete individual tasks in the time allotted. Categorize work into groupings (lathes, milling machines, drilling machines, grinders, welding machines). Order supplies for fall semester. The incumbent must prioritize the importance of all tasks. (major problems to minor problems)
List the types of resources required to complete this task, project, or activity.	Manuals for major repairs or problems, past experience, knowledge of problem areas, obtaining information or help from someone more qualified if problem is not within the incumbent's range of expertise.
How is/are deadline(s) determined?	All maintenance must be completed before the fall semester begins. Major repairs or problems depend on cost, and the availability of parts.
Who determines if changes to the project or activity are required? Who determines whether these changes have an impact on others? Please provide concrete examples.	If cost is an issue, higher authority is needed before repairs can be completed. The incumbent can change the time to make repairs to a more convenient period if it interferes with a class or other situation.

	#1 occasional (if non, please strike out this sections)
List the project and the role of the incumbent in this activity.	Calibration of measuring instruments.
What are the organizational and/or project management skills needed to bring together and integrate this activity?	Knowledge of all measuring instruments being checked. Regular measuring instrument calibration.
List the types of resources required to complete this task, project, or activity.	Past experience. Instructional material or manuals (maintenance, care, and repair)
How is/are deadline(s) determined?	Measuring instruments are used daily so regular checks are made to ensure proper measurements. In some cases, calibration of instruments is made immediately if one is found to be out of calibration
Who determines if changes to the project or activity are required? Who determines whether these changes have an impact on others? Please provide concrete examples.	Incumbent determines when repairs or calibration is done. Incumbent will decide if a measuring instrument should be replaced because of damage or missing parts.

5. Guiding/ Advising Others

This section describes the **assigned responsibility** of the position to guide or advise others (e.g. other employees, students). Focus the actions taken (rather than the communication skills) that directly assist others in the performance of their work skill development.

Though support staff cannot formally "supervise "others, there may be a requirement to guide others using the incumbent's job expertise. This is beyond being helpful and providing ad hoc advice. It must be an assigned responsibility and must assist or enable others to be able to complete their own tasks. Check the box(es) that best describe the level of responsibility assigned to the position and provide an example(s) to support the selection, including the positions that the incumbent guides or advises.

Regular & Recurring	Occasional	Level	Example
☐	☐	Minimal requirement to guide/ advise other. The incumbent may be required to explain procedures to other employees or students	
☐	☐	There is a need for the incumbent to demonstrate correct processes/ procedures to others so that they can complete certain tasks	
☒	☐	The incumbent recommends a course of action or makes decisions so that others can perform their day-to-day activities.	Users' expertise to assist students and faculty with the completion of tasks by providing technical advice on problems related to experiments, projects, and tests. Assists students in understanding the application of theory. Assists in the design, construction and testing of equipment, experiments, and projects. Advises and supplies students/faculty and staff with various technical information on lab projects. Makes decisions which affect day to day activities, such as whether or not a particular piece of equipment in the lab usable or not.
☐	☐	The incumbent is an active participant and has ongoing involvement in the progress of others with whom he/she has the responsibility to demonstrate correct processes/procedures or provide direction.	
☐	☐	The incumbent is responsible for allocating tasks to others and recommending a course of action or making necessary decisions to ensure the tasks are completed.	

6. Independence of Action

Please illustrate the type of independence or autonomy exercised in this position. Consideration is to be given to the degree of freedom and constraints that define the parameters in which the incumbent works.

What are the instructions that are typically required or provided at the beginning of a work assignment?	
Regular and Recurring	Occasional (If none, please strike out this section)
Day-to-day activity/work is performed independently following established guidelines and past practices usually provided in advance by the coordinator or faculty.	

What rules, procedures, past practices, or guidelines are available to guide the incumbent?	
Regular and Recurring	Occasional (If none, please strike out this section)
Incumbent relies on past practices, technical knowledge, and experience in order to support work assignments i.e., purchasing which suppliers to use. Equipment manuals, schematics and past maintenance records are usually available for troubleshooting procedures.	

How is work reviewed or verified (e.g., Feedback from others, work processes, supervisor)?	
Regular and Recurring	Occasional (If none, please strike out this section)
-Faculty feedback is given to incumbents after labs to implement changes and designs for improvement -Errors are usually detected by client (faculty or students) feedback	

6. Independence of Action

Describe the type of decisions the incumbent will make in consultation with someone else other than the supervisor.	
Regular and Recurring	Occasional (If none, please strike out this section)
Changes with products from suppliers, Alternations or repairs with physical plants involving systems which are outside the scope of position	

Describe the type of decisions that would be decided in consultation with the supervisor.	
Regular and Recurring	Occasional (If none, please strike out this section)
Changes to established procedures Physical changes to the trades labs Staffing and student issues Budgetary issues Health & Safety issues	

Describe the type of decisions that would be decided by the incumbent.	
Regular and Recurring	Occasional (If none, please strike out this section)
- who requests for service should be directed to - whether the request needs immediate attention, for example power in lab is down, health and safety concerns etc. or should it be placed in a work order queue -if a request for service has been delayed –should its priority change or be re-scheduled to a later date	-Schedules for summer preventive maintenance -If a piece of equipment cannot be repaired in house, the incumbent contacts a service company to make arrangements for servicing. -Health & Safety measures in the Technology Labs

7. Service Delivery

This section looks at the service relationship that is an assigned requirement of the position. It considers the required manner in which a position delivers service to customers. It is not intended to examine the incumbent's interpersonal relationship with those customers, and the normal anticipation of what customers want and then supplying it efficiently. It considers how the request for service is received and the degree to which the position is required to design and fulfill the service requirement. A "customer" is defined in the broadest sense as a person or group of people and can be internal or external to the College.

In the table below, list the key service(s) and its associated customers. Describe how the request for service is received by the incumbent, how the service is carried out and the frequency.

Information on the service		Customer	Frequency (D,W,M,I)*
How is it received?	How is it carried out?		
As the technologist, all inquiries are initially received either verbally or in writing and handled by the incumbent. Requests to repair or service equipment are usually received verbally from the last user.	The majority of the service requests are straight forward; in most cases the incumbent will attend to the request immediately, to determine the scope of the repair using analytical techniques to resolve atypical problems as soon as possible. It must be determined if and when the repair can be made.	Faculty, students, managers	D
Assist in the lab with demonstrations on equipment usage and student projects.	Usually under the direction of the faculty the incumbent will assist the student (s) with their assignment /project ensuring that they understand the correct process and procedures for that particular piece of equipment	Students	D

* D = Daily W = Weekly M = monthly I = Infrequently

8. Communication

In the table below indicates the type of communication skills required to deal effectively with others. Be sure to list both verbal (e.g., exchanging information, formal presentations) and written (e.g., initiate memos, reports, proposals) in the section (s) that best describes the method of communication.

Communication Skill/Method	Example	Audience	Frequency (D,W,M,I)*
Exchanging routine information, extending common courtesy	Day-to-day operation and repair of the machine shop	Faculty, Support Staff, Students, managers	D
Explanation and interpretation of information or ideas.	Verbal communications with students in labs	students	W
Imparting technical information and advice	Satisfying technical requests - verbally and in writing - problem solving technical issues, advising, assisting, and providing technical advice and equipment operating procedures. Provides technical and operating procedures for students, staff, and faculty lab equipment.	students	W
Instructing or training	Demonstrates correct procedures/ processes, techniques and equipment operation and supervises students in the operation/application of lab equipment in the various trade's shops.	Students and other staff	W
Obtaining cooperation or consent			
Negotiating			

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9. Physical Effort

In the tables below, describe the type of physical activity that is required on a regular basis. Please indicate the activity as well as the frequency, the average duration of each activity and whether there is the ability to reduce any strain by changing positions or performing another activity. Activities to be considered are sitting, standing, walking, climbing, crouching, and lifting and/or carrying light, medium or heavy objects, pushing, pulling, working in an awkward position, or maintaining one position for a long period.

Physical Activity	Frequency (D,W,M,I)*	Duration			Ability to reduce strain		
		< 1 hr at a time	1-2 hrs at a time	> 2 hrs at a time	Yes	No	N/A
sitting	I	X			X		
Standing	D		X				X
walking	D		X				X
crouching	I	X					X
Lifting	W	X			X		

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If lifting is required, please indicate the weights below and provide examples.

☒ Light (up to 5 kg or 11 lbs.)	projects
☒ Medium (between 5 to 20 kg and 11 to 44 lbs.)	supplies
☒ Heavy (over 20 kg. or 44 lbs.)	Metal stock

10. Audio Visual Effort

Describe the degree of attention or focus required to perform tasks taking into consideration:

- the audio/visual effort and the focus or concentration needed to perform the task and the duration of the task, including breaks (e.g., up to two hrs. at one time including scheduled breaks)
- impact on attention or focus due to changes to deadlines or priorities.
- the need for the incumbent to switch attention between tasks (e.g., multi-tasking where each task requires focus or concentration)
- whether the level of concentration can be maintained throughout the task or is broken due to the number of disruptions

Provide up to three (3) examples of activities that require a higher than usual need for focus and concentration.

Activity #1	Frequency (D,W,M,I)*	Average Duration		
		Short < 30 min	Long up to 2 hrs.	Extended > 2 hrs
Ordering equipment or supplies	W		X	
Can concentration or focus be maintained throughout the duration of the activity? If not, why? ☒ Usually ☐ No				

Activity #2	Frequency (D,W,M,I)*	Average Duration		
		Short < 30 min	Long up to 2 hrs.	Extended > 2 hrs
Explanation of a process or procedure to a student in the lab	D	X		
Can concentration or focus be maintained throughout the duration of the activity? If not, why? ☐ Usually ☒ No, other students interrupting or wanting information				

Activity #3	Frequency (D,W,M,I)*	Average Duration		
		Short < 30 min	Long up to 2 hrs.	Extended > 2 hrs
Inventory control	I		X	
Can concentration or focus be maintained throughout the duration of the activity? If not, why? ☒ Usually ☐ No				

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11. Working Environment

Please check the appropriate box(es) that best describes the work environment and the corresponding frequency and provide an example of the condition.

Working Conditions	Examples	Frequency (D,W,M,I)*
☒ acceptable working conditions (minimal exposure to the conditions listed below	Good working conditions	D
☐ accessing crawl spaces/confined spaces		
☒ dealing with abusive people	Sometimes students will get abusive with their language	I
☐ dealing with abusive people who pose a threat of physical harm.		
☒ difficult weather conditions	Assisting with deliveries and pick up in the outside environment during winter weather conditions.	I
☒ exposure to very high or low temperatures (e.g., freezers)	Assisting with deliveries and pick up in the outside environment during winter temperatures	I
☒ handling hazardous substances	All labs host hazardous substances that need to be handled according to the WHMIS Data Sheets	
☒ smelly, dirty or noisy environment	Machine shop labs can be very noisy, and welding shop can be smelly with welding smoke, especially if the exhaust is not functioning properly. Incumbents will pick up dust, dirt and grease on clothing from making contact with equipment while carrying out responsibilities.	W
☒ travel	Travel to other campuses for meetings or training	M
☒ working in isolated or crowded situations	Sometimes labs are very crowded with students around machinery which require extra vigilance on the part on the incumbent.to ensure health and safety of students	W
☒ other (explain)	Risk of injury to students and employees if machines are not maintained properly or mishandled (e.g., metal cutting machines, welding equipment, rotating equipment, saws)	

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