

# 2017

## Environmental Health and Safety Annual Report to the Board of Governors

Advancing Smart Risk-Taking



Ryerson  
University

Ryerson's goal of a deeply entrenched safety and risk management culture is supported through the provision of a safe campus, strong safety management by our leaders, and a shared vision and ownership of preventing workplace injuries by all Ryersonians. Ultimately a strong safety culture promotes the university's academic and research initiatives.

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**TO OUR BOARD AND COMMUNITY**

The Environmental Health and Safety (EHS) team is committed to delivering on a critical objective for the success of Ryerson University: the creation of a safe environment for learning, working and research. The EHS team actively partners with every department and unit on campus to build a safety culture. In so doing, we want to become the industry leader in our sector.

This report presents the EHS initiatives and advances of 2017. Faced with numerous legislative changes, we restructured our team and expanded EHS management systems and programs across campus.

**Highlights**

As a few highlights, we successfully developed four new safety programs; offered dozens of new training courses; conducted numerous safety inspections, risk assessments, investigations and hazard assessments; and worked with partners throughout our community to incorporate smart risk-taking in their activities.

**Safety programs**

A centerpiece of these initiatives was our focus on lab safety programs that impact research. By providing support for research risk assessments and developing safety operating protocols, we are establishing the comprehensive systems required to meet the needs of a cutting-edge research university.

**Collaboration**

The successes highlighted in this report would not have been possible without the cohesive and collaborative team at EHS. We take great pride in our work and feel privileged to be charged with the important task of promoting and supporting a safe and healthy campus at Ryerson.

**Customized solutions**

In addition to particular initiatives, EHS is transforming safety at Ryerson by shifting toward customized solutions. We now design supports with individual department and unit needs in mind, which ensures an open dialogue and reduces inefficiencies related to undue administrative or bureaucratic processes. An example of this shift was the 2017 launch of the Departmental Safety Committees program. This initiative assigns each of Ryerson's academic and large non-academic departments a designated safety committee charged with addressing the particular safety needs of their area. Through embedded design and discussion, EHS has improved engagement and participation in safety initiatives which are essential to the advancement of Ryerson's safety culture.

Ultimately, the state of safety on campus is a credit to the entire Ryerson community.

As I reflect on the past year, I am certain that by looking out for each other, and striving to create the best possible systems and programs, we will continue to ensure Ryerson University is a safe place to be.

**Geeta Sharma, MPH, CRSP, CRM**  
*Director, Environmental Health and Safety (EHS) and Risk Management*

# Environmental Health & Safety Accomplishments



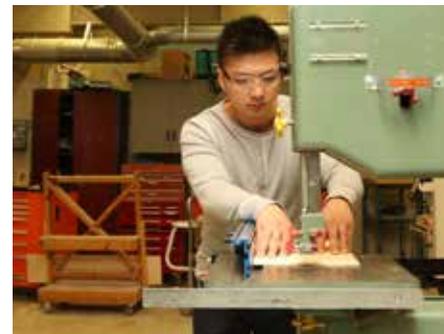
## THREE-YEAR ACTION PLAN UPDATE

In 2016, in consultation with the deans, the EHS team developed a three-year action plan that informs the development of key safety programs and the implementation of a sustainable safety culture. We are currently in year two of the plan, with all programs for the first two years underway and on schedule.

Year 1 July 2016 - June 2017	Year 2 July 2017 - June 2018	Year 3 July 2018 - June 2019
Departmental Safety Officer (DSO) Program	Noise Safety Program	Electrical Safety
Chemical Safety Program	Risk Assessment Database	Hot Work
Machine/Equipment Safety Program	Working at Heights Program	Confined Spaces
Office Ergonomics Program	-	Designated Substances
Safety Training (Student-focused)	Lab Safety Program	Medical Surveillance Program

## IDENTIFYING HAZARDS

Hazard assessments are conducted for any concerns involving physical hazards (such as noise, laser, radiation and temperature), chemical and biological hazards (such as mould and communicable diseases), and general safety hazards (such as electrical hazards, machinery, equipment and materials handling).



## DID YOU KNOW?

In 2017 the EHS team conducted:

**20+** safety walk-throughs performed on maintenance rooms throughout the university

**25+** physical space assessments (noise, IAQ, temperature, mould, radiation)

**85+** lab inspections for safe chemical storage



**500+** research risk assessments reviewed

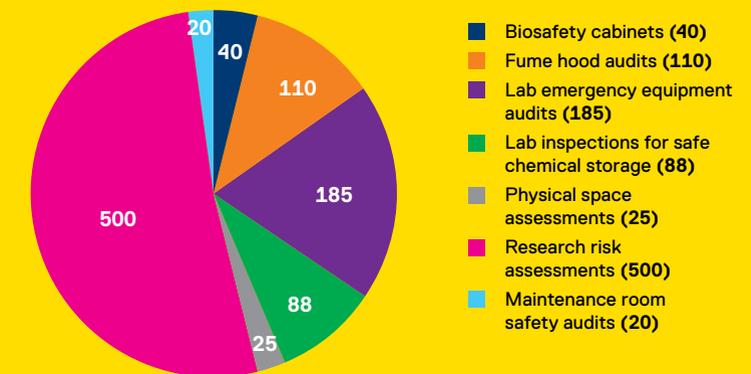
**110+** fume hood audits



**185+** assessments of lab emergency equipment (spill kit, eye wash, safety showers and drench hose)

**40+** biosafety cabinet audits

Environmental Health and Safety Inspections and Audits



**RESEARCH AND LAB SAFETY PROGRAMS**



**Biosafety**

Ryerson has 12 Containment Level 2 (CL2) labs for biological research and learning activities. The university is accountable for putting into place biosafety practices and control measures to ensure the risk of exposure to infectious materials is reduced for all members of our community and the environment.

In 2017, to ensure safety and legislative compliance with the Public Health Agency of Canada’s Canadian Biosafety Standards within these labs, EHS:

- Conducted an audit of all our CL2 labs and addressed all deficiencies
- Commissioned three new CL2 labs
- Re-established the Institutional Biosafety Committee as the overarching authority that oversees the university’s biological safety policies and programs
- Submitted the Plan for Administrative Oversight under the *Human Pathogens and Toxins Regulation*

**Chemical and lab safety**

In 2017, EHS undertook consultation on the above two new programs that included:

- a revitalized and safe hazardous waste disposal process
- extensive new chemical and lab safety training programs
- implementation of formal audit and certification programs for fume hood inspections, biosafety cabinets and lab emergency equipment
- development of guidelines for chemical storage/segregation and spills

Did you know?

-  500+ wet labs, including shops, are housed at Ryerson
-  85 chemical storage audits were completed
-  \$110K+ was spent on hazard chemical and biological waste disposal
-  1,200 chemicals were added to the university inventory system for a total of 14,000
-  8,300 kg of hazardous chemical and biological waste was safely disposed of in accordance with regulatory requirements

**Machine, equipment, and storage racking safety**

EHS implemented an institutional Machine and Equipment Safety Program that includes machine safety training, lockout/tag-out procedures and safe operating procedures.

In 2018, we will be expanding this program to include:

-  machine safety training sessions
-  35+ pre-start health and safety reviews
-  machine guarding, emergency stop, and storage racking risk assessments on lab and studio equipment

**Radiation safety**

- 5** X-ray lab inspections
- 1** new radiation lab commissioned in MaRS
- 9** laser lab inspections
- 2** X-ray registrations with MOL
-  Annual report successfully submitted to the Canadian Nuclear Safety Commission (CNSC)

**Institutional safety programs**

EHS has revitalized the Departmental Safety Officer (DSO) Program. Each faculty and large non-academic department has a designated DSO who received extensive training during the launch of this initiative.

Training in 2017	# of sessions	# of participants
Safety Orientation or Onboarding	5	59
Mandatory Safety Training (OHS Act, Accident Investigation, Workplace Inspection)	7	110
Hazard-Specific Safety Training (e.g. Indoor Air Quality Awareness, Office Ergonomics etc.)	5	50



**Office ergonomics**

In 2017, Ryerson students, faculty and staff continued to access the resources launched last year for the office ergonomics program.

Office ergonomics	Views
Setting up your ergonomic workstation (factsheet)	60
Stretches to do at your desk (factsheet)	26
Setting up your desktop or laptop ergonomically	135
Working ergonomically with handheld devices	46
Musculoskeletal disorder prevention strategies	67
Setting up an ergonomic workstation (e-learning)	10
Ergonomics web page	2,000
Ergonomic chairs	900+ ordered
Ergonomic assessments completed	23



**Sharps containers pilot program**

Facilities Management and Development (FMD) and Campus Safety frontline employees often come across sharps in their daily work and are trained to safely dispose of them through standard operating procedures. In 2018, EHS will launch a six-month sharps containers installation pilot project in 18 washrooms across campus to provide an alternate safe disposal venue.

**Joint Health and Safety Committee (JHSC)**

In the spirit of continual improvement, the JHSC undertook a 2017 self-evaluation, including:

- standardization of meetings and agenda
- identification of team strengths, key priorities and an action plan for the next few years through a retreat session
- standardization of EHS and DSO boards to increase JHSC visibility and roles
- provide opportunity for certification training of all members
- 51 incidents reviewed with a focus on prevention

In 2018, the JHSC will embark on committee-wide JHSC certification training while also ramping up our safety communication strategy.

**Assessments we conducted for people working at heights**

-  We conducted a safety audit of 40+ rooftops
-  Developed a roof access risk process
-  Completed 50+ roof access risk assessments

**COMMUNICATION INITIATIVES**

In 2017, EHS implemented a series of initiatives to improve internal communications with stakeholders at Ryerson.

**Bulletin board project**

- Installed two institutional EHS bulletin boards with information required by legislation.
- Implemented a safety bulletin board in every department providing information on JHSC membership, emergency procedures and each area’s specific fire warden, DSO and first aider.

Example of regular communication through a safety tip sheet



**Portable Space Heaters**

Portable space heaters are a convenient way to supply additional heat for your home or office during the winter months. However, when used improperly they can be a serious fire and electrical hazard. If you find your workplace to be particularly cold, please submit a Service Request to have the issue assessed. Heaters should only be used in areas reviewed by Facilities Management and Development. Here’s how you can help keep yourself and others safe while using portable space heaters:

- Only use a heater that bears an official mark or label indicating that the product has been independently assessed for safety (e.g. UL or CSA certified). Visit the Electrical Safety Authority (ESA) website for a list of recognized certification marks and labels.
- If you are purchasing a new heater, consider one with a tip-over switch. This safety feature turns the heater off automatically when it’s tipped over.
- Give your heater some space. Always maintain a minimum of three feet between the heater and any combustible materials, including chairs, curtains and papers.
- Check cords for damages or frays before each use.
- Ensure your heater is securely plugged into a power outlet and that the cable is not a tripping hazard. It should also be placed on a level surface to prevent it from easily tipping over. Do not place it on top of tables, chairs or any unstable surfaces.
- Turn off the power when you leave the room and never leave it on unsupervised.
- Do not plug your heater into an extension cord or power bar as this can increase the chance it will overheat and potentially cause a fire.
- If the power cord feels hot to the touch, immediately unplug it and do not use it until a certified electrician inspects it for damage.
- Do not use the heater near water or touch it if you are wet, as this could increase your risk of being electrocuted.
- Do not place the power cord underneath carpets, rugs or furniture, as this could prevent the cord from releasing its retained heat and potentially cause a fire.



*Related legislation:* Electricity Act and Regulations; Occupational Health and Safety Act; Ontario Regulation 851. *Source:* U.S. Consumer Product Safety Commission Reducing Fire Hazards for Portable Electric Heaters. *Related policy:* Use of Personal Electrical Appliances within the University Policy

**ENVIRONMENTAL HEALTH AND SAFETY TRAINING UPDATES**

Safety training allows the Environmental Health and Safety team to ensure that all Ryerson students, faculty and staff are aware of the safest ways to work, research and learn. We offer training through YouTube videos, e-learning courses and in-class sessions. In 2017, we offered more training than in the past three years combined.

**Did you know?**

All of our safety training is developed at Ryerson for Ryersonians. It is designed to appeal to both students, faculty and staff. It is offered in multiple formats to meet users needs.

**750+**

Our YouTube videos were accessed more than 750 times

**3,000+**

Our e-learning courses were conducted more than 3,000 times

**INSTITUTIONAL PARTNERSHIPS**

**Ministry of Labour (MOL) activity**

The EHS team liaises with various regulatory bodies including the MOL, Public Health Agency of Canada and the Canadian Nuclear Safety Commission etc. This year with MOL involvement, Ryerson reported two critical injuries to the MOL. Neither one resulted in any compliance orders being issued to the university.

**Task forces and committees**

The EHS team is involved in many institutional committees:

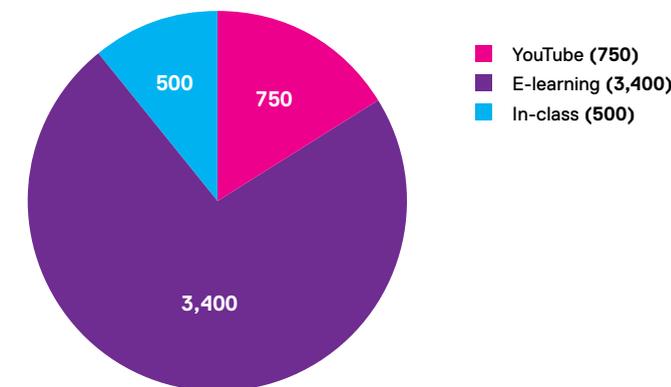
- Public Health Threats Committee
- Biosafety Committee
- Strategic Investment Fund Steering Committee
- Daphne Cockwell Complex Steering Committee
- Centre For Urban Innovation Steering Committee
- Marijuana Committee
- Joint Health and Safety Committee
- Departmental Safety Officer (DSO)
- Emergency Response Committee

**In-class sessions**

Training type	# of attendees
Biosafety	165
Radiation Safety	17
Laser Safety	32
X-ray	7
Transportation of Dangerous Goods	15
Lockout/Tag-out	44
Asbestos	23
Fire Warden	113
Fire Extinguisher	73
Departmental Safety Officer (DSO) Orientation	47
DSO - Occupational Health and Safety Act (OHSA)	52
DSO - Accident Investigation/Workplace Inspection Training	51
Infection Prevention and Control	72
Office Ergonomics	87
<b>Total</b>	<b>581</b>

In-class sessions are offered for high-risk hazards through the corporate events calendar.

**Did you know EHS trained almost 5,000 Ryersonians?**



**Lab signage**

Ryerson has standardized laboratory signage so that, before entering an area, everyone is aware of the hazards, personal protection equipment (PPE) required and emergency contact information. In 2017, 67 rooms updated their lab door signage and in 2018, EHS will audit the remaining laboratories to bring all labs in line with the new Ryerson branding standards.

Example of 2015 WHMIS chemical hazard symbols



**Website update**

We refreshed our website in 2017 to update the content and access to reflect Ryerson’s current needs. Since the rollout in October 2017, there have been more than 23,000 page views.

**WORKPLACE INSPECTIONS, AUDITS AND ASSESSMENTS**

Workplace inspections and audits facilitate a proactive identification of hazards. Ryerson students, faculty and staff in every department conducted a total of almost 1,000 safety inspections of their workspaces.

# WSIB Injury Statistics

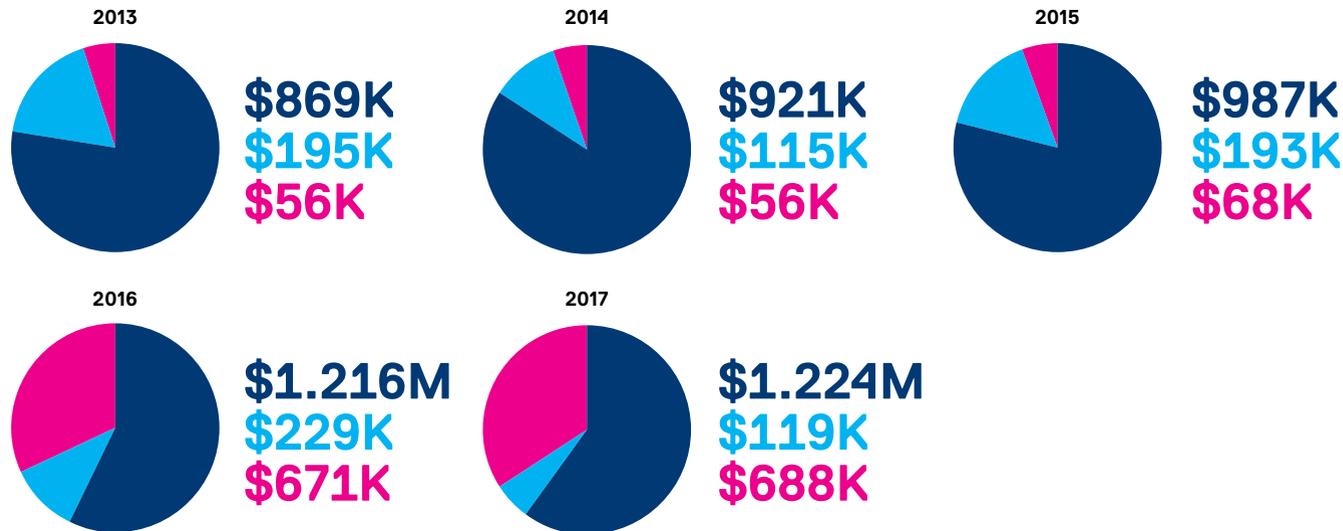
Ryerson's goal remains to prevent injuries on campus.



## WSIB COSTS

Over the last five years, Ryerson has earned \$851,000 back in rebates.

■ Premium ■ Rebates ■ WSIB NEER costs



## NEER PERFORMANCE RATING

The WSIB New Experimental Experience Rating (NEER) program provides rebates/surcharges based on the previous four years. NEER is an experience rating program that factors in total benefits paid, future projected costs and an administrative cost.

The table below summarizes the workplace LTIs and NEER statistics from 2014-2017.

	2014	2015	2016	2017	
Critical Injuries*	0	0	0	2	▲
Days Lost**	89	64	176	404	▲
Lost Time Injuries (LTIs)	12	12	20	21	▲
Severity Rate†	8.26	6.73	2.89	6.88	▲
Performance Index (PI)††	0.29	0.22	0.56	2.54	▲

Ryerson received a rebate of \$119K in 2017 due to our low claim experience (lost time claims and days lost, in the past four years). However in 2017, our performance index (PI) was higher and therefore runs a risk of a surcharge in 2018.

Of the 404 days lost, two claims accounted for 48% of the total. One claim (127 days lost) was due to a strain (shoulder) from overexertion that the worker re-injured two months later. Another claim (67 days lost) was due to a fall outdoors that led to a knee injury. Both claims incurred significant NEER cost, which contributed to our high PI.

Over the next few months, Ryerson will be reviewing our case management protocols to identify opportunities within our "early and safe return to work" processes.

\* **Critical injuries:** Are defined under the occupational health and safety act to include serious injuries like unconsciousness, fractures, extensive loss of blood etc. Of the two critical injuries, both included a fractured wrist (one occurred during a play rehearsal and the second when an employee fell stepping out of a car).

\*\* **Days Lost:** Total full days an employee is away from work recuperating from a workplace injury.

† **Severity Rate:** Year-to-date days lost regardless of accident dates divided by the full time equivalent worker multiplied by 100.

†† **PI:** A comparison between the firm's actual injury cost and the expected costs. PI greater than 1 indicates surcharge and PI less than 1 indicates a rebate.

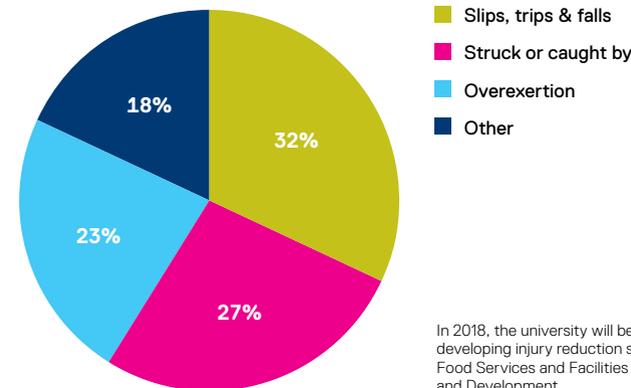
## LOST TIME INJURIES (LTIs)

LTIs are injuries that result in a disability where the employee is unable to return to work the next day.

In 2017, Ryerson had 21 LTIs, the majority (62%) of which occurred in Food Services and Facilities Management and Development, mainly due to the physical nature of the work in these areas.

Food services across our sector typically have a higher injury rate. As such most universities have food services contracted out and these injuries do not factor in their WSIB numbers. At Ryerson, because food services are in-house, these numbers are included in our WSIB data. Our frequency is still low and comparable to other universities that have food services contracted out.

Cause of LTIs

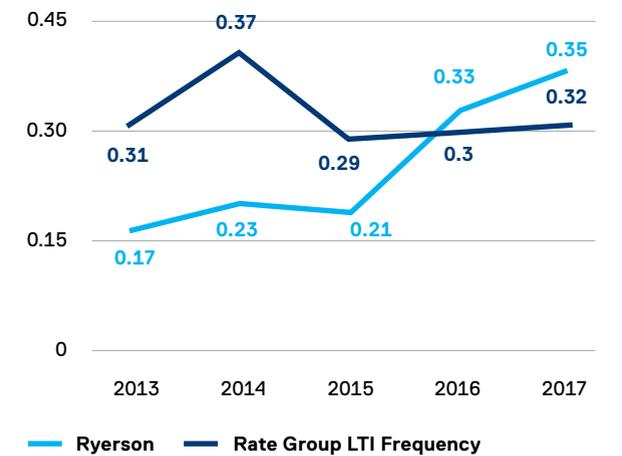


In 2018, the university will be focusing on developing injury reduction strategies with Food Services and Facilities Management and Development.

## Ryerson's LTI frequency comparison to Rate Group\*

Based on WSIB's December 2017 report, and in comparison to firms within our WSIB rate group, our LTI frequency (0.35 per 100 workers) was slightly higher than our comparator rate group's LTI frequency (0.32).

LTI frequency comparison to rate group



\* Rate Group represents firms within similar industries (e.g. universities, schools, etc).

# Legislative Changes

## CHANGES IN 2017

Safety, environmental and WSIB legislative requirements shift constantly, so EHS must continually monitor changes and respond accordingly to ensure compliance.

### Health & Safety Legislation

Workplace Hazardous Materials Information Systems (WHMIS) 2015 legislation comes into play in phases between February 2015 and December 2018. By December 1, 2018, all Canadian manufacturers, importers, distributors, suppliers and employers are required to have updated labelling and Safety Data Sheets (SDS) information requirements, and employers are expected to have WHMIS 2015 compliant labelling on all chemical containers and up-to-date SDSs readily available. In 2017, EHS developed an e-learning module on WHMIS 2015 to facilitate compliance with employee education on the new requirements and also developed a workplace label template that can be used in-house. EHS will communicate and assist in implementing all the requirements in 2018.

### Amendment to the Occupational Health and Safety Act

Changes to the Act in 2017 are:

1. The Act has been amended to increase the penalty for a conviction. Individual fines have now been increased from \$25,000 to \$100,000 per charge and corporate fines from \$500,000 to \$1.5 million.
2. Voluntary Health and Safety Management System (HSMS) accreditation. The Occupational Health and Safety Act was amended at the end of 2016 to permit the introduction of voluntary accreditation of employer health and safety management systems. The proposed standard was introduced and provided for commentary in mid-2017.

### Environmental Legislation

Environmental Activity and Sector Registry (EASR) came into play that requires universities to register their air and noise emissions through professional engineers to the Ministry of the Environment and Climate Change (MOECC), replacing the Environmental Compliance Approval (ECA). This legislation is designed to reduce both environmental and noise pollution; we will review each Ryerson building and determine which ones will require registration with the MOECC. The process will require significant documentation and we will need to retain a professional engineer to prepare and sign off on Ryerson's registration in 2019.

### Changes to WSIB

WSIB Rate Framework Modernization is slated for implementation in 2019-2020, but it is expected that significant adjustments may occur in 2018. In preparation, Ryerson will be monitoring the impact of the reduction of the rate groups from 155 to 34 and the new premiums that will be based on every employer's individual risk profile.

#### New WSIB Policies

1. The first is the **Work-Related Chronic Mental Stress Policy**. Starting January 1, 2018, people with work-related chronic mental stress may be eligible for WSIB benefits. Specifically this would include work-related mental stress that could be the result of being subjected to workplace harassment or bullying.
2. The second policy relates to the revision of the **Traumatic Mental Stress Policy** by removing the requirement that the traumatic event be "sudden and unexpected." Traumatic events would now also include an employee being the object of workplace harassment such as physical violence or threats of physical violence.

Ryerson already has strong programs on workplace violence, harassment and civility. These programs will serve us well in managing these two new WSIB policies.

# Strategic Priorities for 2018

At EHS, we have key areas of focus for 2018-2019, and they are in training, safety programs and legislation implementation.



## NEW PROGRAMS IN 2018

### Safety programs

#### Near Miss, Incident and Injury Investigation Program

EHS is updating the Near Miss, Incident and Injury Investigation Program to ensure early and accurate reporting of incidents and injuries as well as near misses. The goal of this initiative is to improve reporting time, identify key factors that may have led up to an event, and support the EHS mission to keep Ryerson safe.

#### Animals on Campus Guideline

Ryerson's Animals on Campus Guideline is being revised to comply with changes to the AODA Customer Service Standard to promote a culture of equity and inclusion for Ryerson students, faculty and staff, as well as visitors to the campus.

#### Working Alone Program

The Working Alone Program is being updated to allow supervisors and managers to identify potential risks for their employees when working alone or in isolation. In addition, a new risk assessment template and safety plan checklist has been designed to ensure the appropriate controls for all medium and high-risk work.

#### Noise and Hearing Conservation Program

In 2018, the EHS team will conduct noise sampling across the campus and implement a noise prevention and hearing conservation program.

#### Machine, Equipment and Racking Safety Programs

In 2018, EHS will conduct audits of machine guarding, emergency stops and lockout/tag-out on student-centric machines in laboratories and machine shops.

## UPCOMING TRAINING FOR 2018

In 2018, Ryerson will be launching new training sessions.

- Mandatory EHS Awareness Training via online and in-class modules (for all Ryerson students, faculty and staff)
- Mandatory WHMIS 2015 Training via an e-learning module (for all Ryerson students, faculty and staff)
- Additional targeted in-class EHS training as follows:

### Upcoming training

Leading with Safety for Managers and Supervisors

Machine Guarding Awareness

Working at Heights Training

Lab Safety for Managers and Supervisors

Chemical Safety/WHMIS 2015

Noise and Hearing Conservation

Environmental Awareness



## COMPLIANCE STRATEGIES WITH NEW LEGISLATION

In response to legislative changes, EHS will:

- Work with other units to respond to the upcoming cannabis legalization and the resultant impacts on students, faculty and staff.
- Leverage our chemical inventory systems, HECHMET and ChemWatch, to enable Ryerson to be fully compliant with WHMIS 2015 legislation which will require all hazardous materials to be relabelled by December 2018.
- Monitor developments on the Voluntary Occupational Health and Safety Management System Accreditation and Employer Recognition Program for Ontario Workplaces and determine if Ryerson should seek accreditation.

# EHS Team

Our team consists of highly qualified individuals (both in education and experience) who bring a wide range of expertise to the Ryerson University community. We're also proud to say we come from all over the world and speak several languages aside from French and English, such as Cantonese, Croatian, Hindi, Punjabi, Serbian and Tamil.

#### Geeta Sharma, MPH CRM CRSP

Director, EHS and Risk Management

#### Tanya Vlaskalin, MSC CRPA(R) CRSP

Manager, EHS, Biological, Chemical and Radiological Risk

#### Amanda Barber, MASC CRSP ROH

Manager, EHS, Programs

#### Kim Lan Sauer, MPH

Manager, EHS, Chemicals and Controlled Products

#### Amit Rajhans, PEng. DOHS

Manager, Engineering and Physical Infrastructure

#### Patricia Yu, BSc DOHS CIH ROH

Senior Health and Safety Officer

#### Eric Ambroise, BSc

Lab Safety Officer

#### Shahim Sukhdeo, Diploma in Chemical Engineering Technology

Chemical and Hazardous Material Coordinator

#### Philani Moyo, FCIP CRM

Risk and Insurance Officer

We highly value student experiential learning and hired several student interns in 2017. All of our interns from previous years have moved on to successful professional careers.

## Environmental Health and Safety

For more information on our efforts and an online version of this report, visit [ryerson.ca/ehs](http://ryerson.ca/ehs).

### EHS contact information

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April 2018

**Ryerson University**

