



Sheridan
mission zero

The Zero Waste plan will help guide Sheridan
to become a zero waste campus by 2020.

Sheridan publications are printed on 100% recycled paper, in keeping with Sheridan's
commitment to sustainability, conservation and waste elimination.





Letter from the President

I am pleased to introduce Sheridan's inaugural Sustainability Report, which documents our progress towards our **Mission Zero** objectives, and reflects Sheridan's commitment to become an institutional model for sustainability in the 21st century.

Since the Office for Sustainability opened in 2010, it has led a shift in our culture, instilling a greater awareness about our individual and collective environmental impact among employees and students. This engagement can be seen in the work of 'Green Teams' - groups of volunteers at each campus who meet regularly to discuss ways of advancing sustainability.

Through the Integrated Energy and Climate Master Plan, great strides have been made towards our goal of reducing energy consumption by 50% and greenhouse gas emissions by 60% by 2020. The deployment of Zero Waste Stations at all campuses has significantly boosted the diversion of waste from landfill – another important achievement.

Considerable progress has also been made towards introducing sustainability in course content across all of our faculties – another way that Sheridan is educating our students about real-world problems. Through our combined awareness and education initiatives, we will ensure that the next generation of Sheridan graduates brings a sustainability orientation to their workplaces and communities.

I hope you will find this report both informative and inspiring, as it details the tremendous gains that can be made to support sustainability through the concerted efforts of a small but dedicated team.

Dr. Jeff Zabudsky
President and CEO

Introduction

Sheridan College is proud to showcase its sustainability efforts in its first Sustainability Report. The achievements celebrated in this report are a snapshot of activities in Academics, Engagement, Operations, and Planning & Administration.



In April 2015, Sheridan was awarded a Silver rating from the Association for the Advancement of Sustainability in Higher Education (AASHE). AASHE's Sustainability Tracking, Assessment & Rating System (STARS) program is the most widely recognized framework in the world for publicly reporting comprehensive information about a college or university's sustainability performance.

In three years, Sheridan College improved from a Bronze to a Silver rating. Our accomplishment reflects a significant improvement in energy efficiency, less waste generated per campus user, and better data tracking.

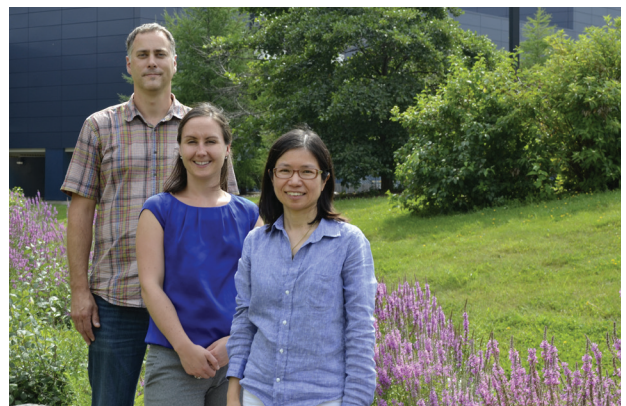
As Sheridan continues its journey to become Sheridan University, we'll maintain our commitment to sustainability, keep sustainability best practices in mind and strive for continuous improvement. The transparent and accountable framework of STARS has been a valuable tool that has allowed us to identify key areas for future improvement, which we'll attempt to address for future submissions.

Acknowledgements

The majority of the data and information in this report is based on the STARS submission. Almost every single department contributed to this effort, making the Silver rating possible. We thank each and every one of you for supporting Sheridan's sustainability efforts.

This report would also not have been possible without the help of co-op students who worked on collecting data for Sheridan's 2015 STARS submission. They are: Kiran Gokarn, Abby Gail Hermoso, Michael McMillan and Adrian Ozimek. In addition, Chelsie Grant and Weihang ("Vivian") Zhou created the beautiful graphics within the report. Chelsie was also responsible for the layout of the report. We also thank Angela Iarocci, a professor in the Faculty of Arts, Animation and Design, who lent her expertise and provided insightful comments on the layout, design and content of the report.

Thank you!



*Photo by Adrian Ozimek
The Office for Sustainability is (left to right):
Herbert Sinnock, Anna Pautler, Wai Chu Cheng*

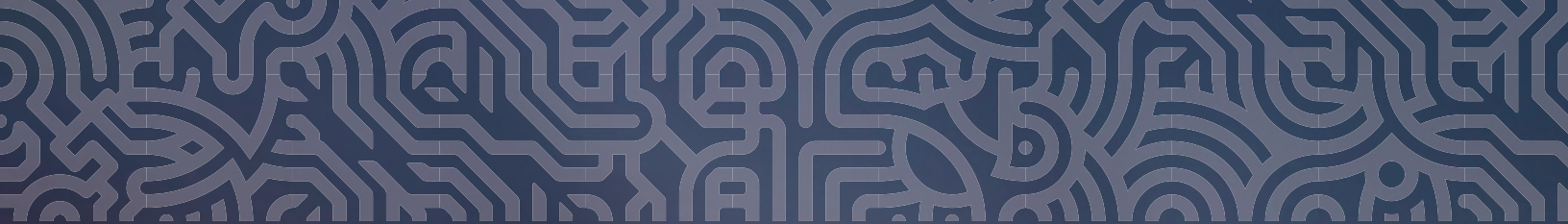


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Sheridan as a Living Laboratory

Sheridan is creating more opportunities to use the campus as a living laboratory. This innovative concept allows students to learn from and experiment with existing infrastructure, consider various solutions or scenarios, or test emerging technologies. Strategically, the Sheridan living laboratory continues to address the need for greater integrated planning across departmental and Faculty boundaries and greatly encourages partnerships between operational staff, professors and students with over 100 involved to date. The implementation of Mission Zero sub-projects provides a large scale "real-life" platform covering all aspects of the economic, business, technical, social, and environmental issues involved in energy, waste and carbon reduction initiatives.

Energy and GHG Emissions

Students in Sheridan's Bachelor of Illustration program completed a project that focused on research and visualization of green roof solutions. Over 50 engineering students created energy models for each building, which helped inform the Integrated Energy and Climate Master Plan (IECMP).

Sheridan students also conducted the first ever greenhouse gas emissions inventory for the institution and others explored strategies for carbon footprint reduction and sustainable business planning.

Waste

During the Fall 2014 semester, a Visual Merchandising class designed display cases related to waste. The displays focused on the problem of waste, proper disposal of specific materials, as well as comparing our diversion rate to other schools.

A student from the Environmental Control program worked on a project comparing electric hand dryers to paper towels using life cycle analysis. This supported the Zero Waste program's initiative of removing paper towels from washrooms. Two other students in the class conducted a visual waste audit of bins in the cafeteria and other high-traffic areas around campus. They helped to identify common contaminants, recommended opportunities for improvement, and informed planning for education and engagement programs.



Photos by Adrian Ozimek

Behaviour Change

In the Spring/Summer semester of 2015, Environmental Control students worked on a Community-Based Social-Marketing project with the OfS. This research project investigated behaviours that Sheridan can target to address specific sustainability issues such as energy reduction or proper waste sorting.

The students:

- Quantified and ranked the social, economic, and environmental impacts of these behaviours.
- Identified potential barriers to addressing each behaviour.
- Evaluated which impacts can be affected by changing individuals' behaviour.
- Wrote a plan to target at least one specific behavior using the CBSM framework.

Sustainability in the Curriculum

As an academic institution, it's important for Sheridan to educate its students about real-world problems.



In the 2013/2014 academic year, over 260 (about 14%) courses had some topics related to sustainability.

Of these, 15% were courses entirely focused on sustainability while 85% contained a unit or learning objective related to sustainability.

To receive full points for this STARS credit, at least 20% of Sheridan's course offerings would need to include sustainability.

Sustainability courses at Sheridan span all five Faculties and one School and range in topics such as: the environment; social justice, poverty, and diversity; sustainable design; and social corporate responsibility. Exposing students to real-world problems is one way Sheridan is reflecting its value to create global citizens.

In addition, the Environmental Control post-graduate program within the Faculty of Applied Science and Technology offers an immersive experience in environmental sustainability. In this program, students complete an applied problem-solving project with a local company, government agency, or organization. Projects typically focus on energy, health and safety, and/or environmental issues.

Sustainability Research

In 2011/2012 the President's Creative Challenge focused on sustainability. Its goal was to encourage student research in sustainability in the following categories:



Energy and Climate



Materials and Waste



Food & Water Systems



Communications & Sustainability Culture



Curriculum & Sustainability



Financing Sustainability & Ethical Investing

There's a wealth of resources available from Sheridan's library to enable students (and employees) to learn about sustainability. The Research Guides are organized by topic, including one specifically for environmental science that includes articles, books, videos and web resources. There's also a Sustainable Design Research Guide that "provides resources related to sustainable design practice to address both global and local issues that can be positively influenced by design. By focusing on a human-centered systems approach, a participatory, open design process can challenge and expand perceptions of the designer's role in society now and beyond."

The role of Library and Learning Services is important in providing electronic resources and affordable access to education. A database of funded and unfunded faculty, staff and student research related to sustainability would also be an excellent addition.



Welcome Aboard

Orientation is both a chance for us to welcome new faces as well as an opportunity to introduce newcomers to the various departments and resources available on campus.

At Sheridan, all professors, staff and students receive an orientation that includes aspects of sustainability.



The Office for Sustainability is invited to attend the Marketplace event where it can engage the campus community about sustainability initiatives, such as Mission Zero or Zero Waste.

At the employee orientation, The Centre for Respectful and Healthy Workplaces gives an overview of diversity and inclusion at Sheridan. In addition, all employees are required to complete mandatory AODA training as well as “Inclusion at Sheridan: Human Rights, AODA and the Sheridan Workplace” training. All of these efforts help create an inclusive and welcoming place to work and learn.



Mend Before You Toss

Sheridan has hosted several [Repair Café](#) events on its campuses. Repair Café helps people fix their broken items with the help of expert volunteer “fixers.” The fixers teach participants how to fix the item while they're repairing it. Experts can help you repair almost anything; common items that people bring in include computers, small appliances, clothes and furniture.



Photos by Chris Coutts (top) and Mark Joseph Yap (bottom)

Join a Green Team

The Office for Sustainability hosts monthly meetings for *Green Teams*, which consist of voluntary members of the Sheridan community. The meetings are a forum for people to share their ideas on how to raise awareness about sustainability in their own office and the Sheridan community. The group is open and welcoming of all ideas on how we can advance sustainability on campus. Each Sheridan campus now has its own Green Team.



Photo by Wai Chu Cheng

Please join us on a *Green Team*:

**All are
welcome
to join!**

Sheridan's Impact in the Community

Many of Sheridan's students, professors and staff are involved in the community. In the 2013/2014 academic year,



**Sheridan students
did an astounding
574,508 hours
of community
service.**

Students receive a co-curricular record for their volunteer activities while the community benefits from their talents and manpower. Formal relationships between organizations and Sheridan create additional opportunities.

The Office for Sustainability is part of the Ontario College and University Sustainability Professionals

(OCUSP). OCUSP is an organization that brings together Canadian Campus Sustainability staff to support mutual initiatives that build knowledge, create capacity and leverage up the role of Canadian Universities and Colleges in accelerating sustainability and climate solutions within their own institutions and broader jurisdictions. The committee meets annually and has an email listserv. This provides networking opportunities for its members as well as a forum in which to share ideas and best practices.

Many of Sheridan's leadership team advocate for policy relating to sustainability by being members or part of committees in local governments. For example, André Plante (Associate VP Corporate Planning) is part of the City of Mississauga's Environmental Advisory Committee; Sheridan College is a supporting member engaged in the City of Mississauga's LGMP Process which is Mississauga's Environmental Master Plan; Herb Sinnock (Sustainable Energy Systems Manager) is a member of Burlington's Sustainable Development Committee; and Dr. Farzad Rayegani (Associate Dean of the School of Mechanical and Electrical Engineering in the Faculty of Applied Science and Technology) has been named Chair of the ASME Committee on Additive Manufacturing.



Excellence in Operations

In 2014, Sheridan College was the proud recipient of the *Building Operating Management* magazine's FMXcellence recognition. This award is given out each year to a handful of North American organizations (from all sectors) that use best practices and innovation in their daily operations. This can include sustainability, energy efficiency, cost savings, project management, capital planning, construction or renovation projects, communication and much more. Sheridan College received the award for its Integrated Energy and Climate Master Plan (IECMP), which touches on many of these items.



90%

Milk comes from farms within 400 km of campus



100%

Soy products come from a local farm in Ripley, ON



77%

Certified seafood purchased



100%

Tea from Ethical Tea Partnership

Food with a Conscience

On behalf of Sheridan, Chartwells (part of Compass Group Canada) has been making sustainable food purchasing choices by choosing local, organic and in-season ingredients.

In 2014, 59% of all food purchases were sourced within 400 km radius of the campus.

This is higher than the average of 27% for other STARS participants, although they include additional criteria for classifying food purchases as sustainable. The 59% includes almost 90% of dairy products that are produced at Ontario farms as well as soy products from Ripley, Ontario. Depending on availability, Chartwells purchases organic coffee and tea, fruits and vegetables, yogurt, and salty and savoury snacks.

In addition, more than three-quarters of seafood was certified as sustainable by third party organizations including Marine Stewardship Certification, MSC assessment, Best Aquaculture Practices or BAP assessment. Chartwells also chooses Rainforest Alliance Certified whole leaf tea blends – all of which come from Ethical Tea Partnership suppliers.

In the Marketplace at both the Trafalgar Road and Davis campuses, we make vegetarian and vegan options available, although these could be labelled more explicitly. Prepared meals can be deconstructed to accommodate dietary restrictions and create complete-protein vegan dishes.

Waste is a Verb

The Sheridan community has taken tremendous strides in improving waste diversion (i.e. how much material is diverted from the landfill through recycling or organics collection) and reducing the absolute amount of waste generated. By the end of 2014, all four campus locations received Zero Waste bins, allowing us to collect organics and improve the recycling rate.

The waste collected in the organics bins goes to a “waste to energy” power plant in London, Ontario where the material is converted to electricity and fertilizer. Although the waste from your coffee cup is being put to good use, it's still preferable to minimize waste altogether and bring your own reusable mug.

You can help further by:

- Bringing your own reusable water bottle, coffee mug, Tupperware, and reusable bags.
- Maintaining proper waste sorting practices.
- Trying to reduce the amount of waste (landfill, recycling and organics!) that you produce by minimizing packaging and only taking as much food as you will eat.

Goals

- | | |
|---|---|
| • Reduce waste to landfill by 50% in 2014 and 75% by 2015 (against 2013 figures). | ✓ Reduce paper use by 10 million sheets by 2014 (see Green Printing). |
| • Capture 20 tons of material for reuse at Sheridan and in the community in 2014 and 30 tons in 2015. | • Eliminate 500 tons of carbon emissions annually by 2014 and 750 tons by 2015. |
| • Achieve a waste diversion rate of 65% by 2014 and 85% by 2015. | ✓ Introduce the Zero Waste program to all Sheridan campuses. |
| • Separate and process 100% of organics by 2014 (on-site by the end of 2016). | |

✓ = Achieved

Progress

By the end of 2014, about 43% of waste was diverted from the landfill through recycling and organics collection. The Trafalgar Road Campus, which was the first to implement the Zero Waste stations, was diverting up to 48% by the end of the year while Davis Campus diverted just over 50%. Although there's still room for improvement, that's impressive progress from the 18% average diversion rate in 2012. Although the average for STARS participants is 39%, many schools are over 65%.

Our Green Space

Sheridan owns and maintains a woodland at its Trafalgar campus, which is protected under the Greenlands System (Regional Natural Heritage System). Other areas of conservation importance include the stream at Trafalgar and the pond at Davis, as they help to conserve the natural hydrology and ecosystems around campus and the surrounding area. The pond at Davis also helps filter runoff from parking lots and other paved areas. Sheridan's Trafalgar campus is also located in the Sixteen Mile Creek watershed which falls within the jurisdiction of Conservation Halton.

In 2012 Urban Forest Associates conducted a review of Sheridan's arboreal assets in Oakville. They inventoried 853 individual trees. BioLogic evaluated the flora and fauna communities. The graphic below shows the number of bird, amphibian, reptile, mammal, butterfly and odonata species that were identified. Sheridan uses best practices to preserve and protect wildlife and environmentally-sensitive areas.



3 Species of mammals

25 Species of birds



10 Species of butterflies

4 Species of odonates



1 Species of reptiles

1 Species of amphibians





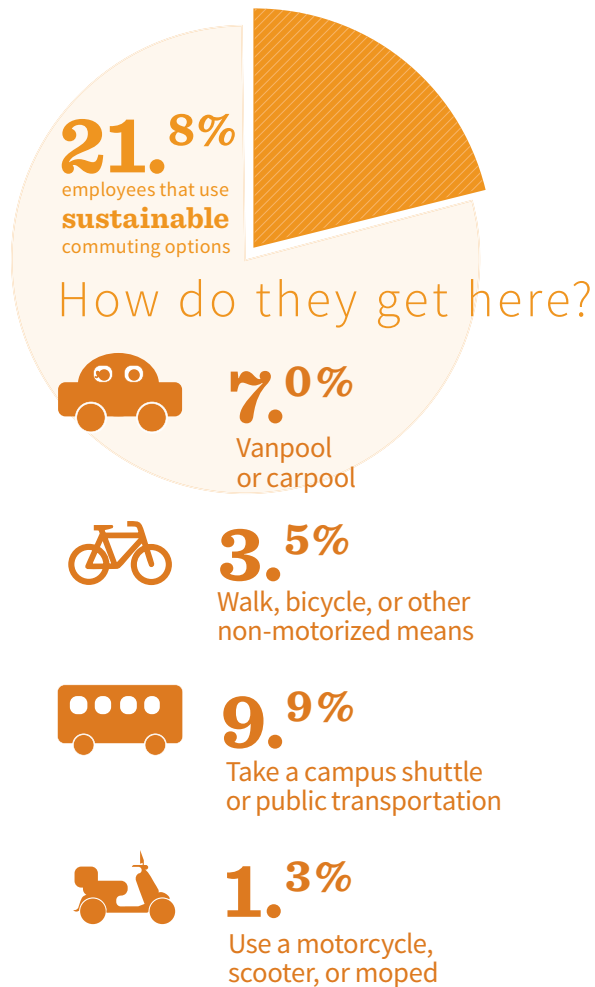
Eco-friendly Transportation Options

While almost 22% of Sheridan's employees use sustainable commuting options, the average for other STARS participants is 30%. The transportation you use has an impact on the environment as well as your health. For example, walking and biking are free and great exercise. Sheridan's campuses have bike racks, indoor storage lockers and showers for your convenience.

Carpooling can help you save on gas, parking permits and other car-related costs. It also improves air quality, reduces your carbon footprint and eases traffic congestion. SmartCommute, of which Sheridan is a member, offers a guaranteed ride home for employees who use their services.

The GTA and surrounding municipalities have many public transit options available including Go Transit (bus and train), TTC and city buses. Sheridan also runs an inter-campus shuttle for all students and employees. The shuttle runs Monday-Friday and features Wi-Fi, recharging stations for cell phones and laptops, bicycle racks, coach style seating and GPS tracking.

Riding a motorcycle, scooter or moped can also be a better option than driving alone. Generally, they take fewer resources to manufacture and ship and also take up less space on the road and in parking lots.



Master Plan

Goal

Use 50% less source energy by 2020.

Progress

In 2013/2014 both electricity and natural gas use went up by 15% and 26.8%, respectively, relative to 2010/2011. However, 2013/2014 was a very cold winter and in this same timeframe, Sheridan also added over 186,000 square feet of space in the new residence increasing the Trafalgar campus' space by 21%. If the increase in space is taken into account, Sheridan actually *decreased* energy use by 3.5% even with the harsh winter. After taking increase in space and weather into account, Sheridan reduced energy use by 3,243 MMBtus (1.9%).

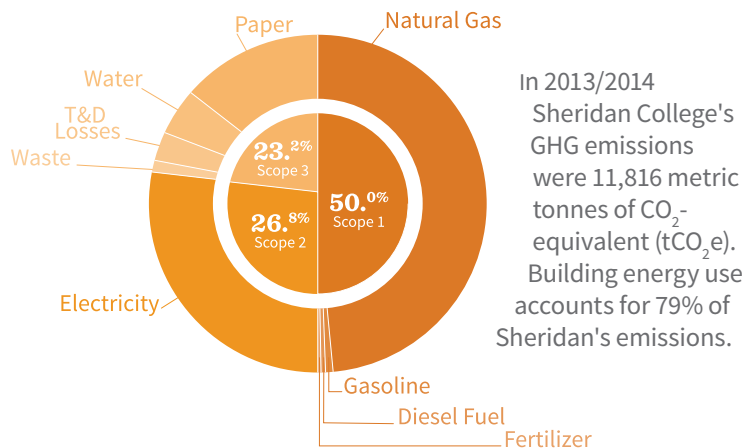
In 2014/2015, we reduced energy use by 5.7% relative to 2010/2011, the majority of which is from electricity reduction, primarily at the Trafalgar campus where the focus has been to date.

The Integrated Energy and Climate Master Plan (IECMP) is Sheridan's guide on how it will use at least 50% less source energy and emit at least 60% less GHG emissions by 2020. It also documents expected Internal Rate of Return, goals for energy security, integrating these topics into the curriculum where applicable, using the campus as a Living Lab, and becoming a national model of how energy planning is done.

Sheridan is making strategic investments over the next several years to:

- Gain control over buildings through campus-wide metering.
- Increase energy efficiency of existing buildings.
- Upgrade heating and cooling system by using on-site district heating and solar PV applications.

Sheridan's Carbon Footprint



The 11,816 metric tonnes of CO₂e is equivalent to...

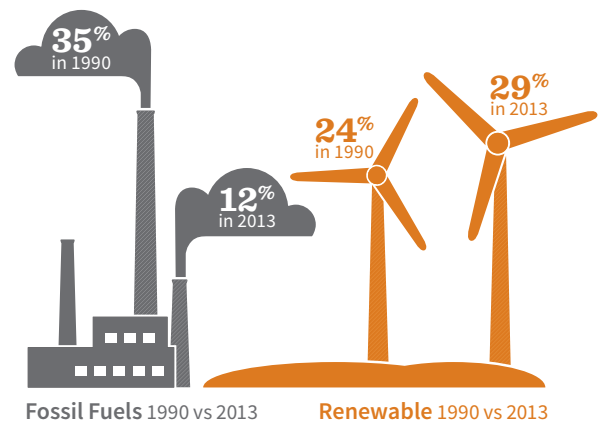
Driving **2,488** cars for a year

Using **5,033,020** litres of gasoline

Powering **12,816** Ontario homes for a year

Consuming **27,479** barrels of oil

In 2013, a whopping 87% of Ontario's electricity was generated using carbon-neutral sources such as wind, solar and nuclear. Of this almost 34% is renewable energy. The phasing out of coal plants has already reduced the amount of GHGs that are emitted per unit of energy produced. Compare this to the early 1990s when coal was over 27% of the fuel mix in Ontario.



This helps Sheridan because if we were located in Alberta, for example, our 2013/2014 electricity emissions would be over 8 times higher. On the other hand, if our campuses were in Quebec, our emissions from electricity use would be 33 times lower. Quebec, along with Manitoba and British Columbia, currently have the cleanest electricity grids in Canada. Regardless, Sheridan is continuing to reduce its source energy use to preserve natural resources, improve air quality and mitigate climate change.

Goal

Reduce emissions by 60% by 2020.

Progress

Total emissions have increased by 1,554 tCO₂e (15.4%) in 2013/2014 relative to 2010/2011. Building energy use emissions have also increased by 23.8% in this time. With the IECMP in place now, we are starting to make progress on reducing energy use and resulting GHG emissions.

Green Printing

Goal

Reduce paper use by 10 M sheets by 2014.

Progress

Sheridan has reduced paper use by a total net of 10,553,500 sheets (small increase in 2012 and an overall decrease in 2013 and 2014) relative to 2011.

The PaperCut program started with a pilot at the Hazel McCallion Campus in May 2011 and finished with the rollout of Multi-functional Devices across all campuses in March 2014. It aims to reduce the number of printers on campus, consequently reducing the number of sheets printed, saving energy and ink, and encouraging accountability amongst students and staff.

A stack of
10 million
sheets of paper
roughly amounts to **2x**
the height of the CN Tower

PaperCut allows students and staff to access their printed materials from any printer on campus. The *onecard* is swiped to locate and release the print job or perform other copying and scanning functions. The print job expires after four hours if the user doesn't release it.





A Welcoming Environment for All

Sheridan's Centre for Respectful and Healthy Workplaces (CRHW) provides:

Leadership in the development and coordination of programs, policies and procedures to provide human rights, equity, and accessibility.

The CRHW supports Sheridan in complying with provincial and federal regulations and provides professional advice, guidance, education and awareness-raising initiatives in the areas of human rights, equity and accessibility as well as oversight and expertise in matters of diversity and cultural change.

In January 2015, Sheridan launched a Gender and Sexual Diversity Survey to assess the campus climate around diversity and equity. The anonymous and voluntary survey was created as part of Sheridan's commitment in its Strategic Plan to provide an inclusive place to work and learn.



This is the first time Sheridan has conducted this type of survey. It was initiated and organized by Sheridan's Gender and Sexual Diversity Taskforce (GSDT), a voluntary advisory committee with members representing various campus stakeholders, particularly those with LGBTQ+ experience.

The survey will act as a campus climate assessment to: gather information about attitudes and experiences; identify existing gaps in initiatives on gender and sexual diversity; and inform decision-making for further work related to creating an inclusive and respectful workplace and learning environment.

Sheridan People Plan

The Sheridan People Plan, launched in 2012, is Sheridan's plan to become the "Employer of Choice." The plan was formulated with the help of Sheridan employees, across all employee types, who had the opportunity to attend focus groups to provide input on current and desired programs and practices that impact their employment. Hundreds participated in the two phases of the project, from which the data was used to inform the outcome of the report and future work that will be done at the College.

Sheridan's 2015/16 approved business plan includes funding for an employee engagement survey and follow-up process to support this initiative. As part of the Sheridan People Plan the following are being reviewed: professional development; relaxing and lounging spaces; personal wellbeing; financial compensation, aid, subsidies and incentives; as well as numerous other programs and benefits.

Funding for Students

Sheridan administers a number of academic scholarships and bursaries to support current full-time and part-time students. This helps make education more affordable and accessible, especially for those with financial need. The criteria for each differs and depends on academic achievement, community involvement, demonstrated leadership skills, and financial need.

Awards are also available for non-traditional students. For example, financial aid is available to part-time students, students with dependents other than a spouse or partner, single parents, students who work full-time while enrolled, financially independent students, Aboriginal students and many more.

In addition, external awards are available from sources outside Sheridan which may include corporate, private or community organizations.



Up to **\$1,500** awarded per person in Sheridan Entrance Bursaries

Sheridan offers **11 bursaries & grants** of various amounts for part-time students



Office for Sustainability

Sheridan College created an Office for Sustainability (OfS) in 2010. The OfS has three full-time staff and frequently works with co-op students, Work Study students and volunteers.

The OfS works as a catalyst for change by:

Partnering with staff, professors and students to foster a culture of sustainability and to use the campus as a “living laboratory” for innovation.

It oversees the implementation of Sheridan's Mission Zero goals and convenes the community to share best practices and develop new programs and policies that strive to serve as replicable models to inspire our students and future leaders. Its role is to act as a multidisciplinary hub in order to find applied solutions and influence adoption of sustainable practices in the postsecondary, government, non-profit and business sectors.



Photo by Adrian Ozimek

Two current strategic plans define the OfS mission:

- The Integrated Energy and Climate Master Plan (IECMP) aims to decrease the institution's overall energy use by 50% and carbon emissions by 60% by 2020 through investment over the next 5-7 years.
- The Zero Waste Sheridan plan will help guide the institution to becoming a zero waste campus by 2020.

“If **success or **failure** of
this planet and of human
beings depended on
how I am and what I do...
HOW WOULD I BE?
WHAT WOULD I DO?”**

- Richard Buckminster Fuller

Learn more.

Get involved.

Contributors

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For more information visit:
sustainability.sheridancollege.ca
aashe.org
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