



2021-22

Sustainable Development Goals



**THE GLOBAL GOALS**

**Western**  
UNIVERSITY • CANADA





# SUSTAINABLE DEVELOPMENT GOALS



## Contents

<b>SDG 1:</b>	NO POVERTY	04
<b>SDG 2:</b>	ZERO HUNGER	06
<b>SDG 3:</b>	GOOD HEALTH AND WELL-BEING	08
<b>SDG 4:</b>	QUALITY EDUCATION	10
<b>SDG 5:</b>	GENDER EQUALITY	12
<b>SDG 6:</b>	CLEAN WATER AND SANITATION	14
<b>SDG 7:</b>	AFFORDABLE AND CLEAN ENERGY	16
<b>SDG 8:</b>	DECENT WORK AND ECONOMIC GROWTH	18
<b>SDG 9:</b>	INDUSTRY, INNOVATION AND INFRASTRUCTURE	20
<b>SDG 10:</b>	REDUCED INEQUALITIES	22
<b>SDG 11:</b>	SUSTAINABLE CITIES AND COMMUNITIES	24
<b>SDG 12:</b>	RESPONSIBLE CONSUMPTION AND PRODUCTION	26
<b>SDG 13:</b>	CLIMATE ACTION	28
<b>SDG 14:</b>	LIFE BELOW WATER	30
<b>SDG 15:</b>	LIFE ON LAND	32
<b>SDG 16:</b>	PEACE, JUSTICE AND STRONG INSTITUTIONS	34
<b>SDG 17:</b>	PARTNERSHIPS FOR THE GOALS	36

### Introduction

In 2015, the United Nations and its member states signed the 2030 Agenda for Sustainable Development - a call to action to meet some of the most pressing challenges facing our world. The specific challenges and objectives are defined in the 17 Sustainable Development Goals (SDGs), which offer states and non-state actors a plan for promoting and achieving sustainability in areas such as the environment, access to food, gender equality, and healthy and safe communities. Canada was one of 193 UN member states that adopted the 2030 Agenda for Sustainable Development and it is committed to implementing the SDGs both in Canada and internationally.

Western is committed to sustainability in all its forms and prepared to play a leading role in areas of research, teaching the SDGs, stewardship, and collaboration with the broader community. By tracking campus initiatives that align with the goals, Western is able to examine current initiatives through a lens that encompasses the three pillars of sustainability— economic, social and environmental, as well as showcase the initiatives and organizations on campus that support creating a more sustainable future for everyone.





# SDG 1: End poverty in all its forms everywhere

## Research

### London Poverty Research Centre at King's UC at Western University

Addressing the root causes of poverty in London, Ontario, [London Poverty Research Centre](#) works towards ending poverty in our community. The centre approaches poverty reduction by focusing on three steps: research, knowledge mobilization, and community action. Working alongside the centre, faculty and students learn more about local and broader poverty reduction initiatives.

### Homes4Women

Through a series of concurrent research initiatives and evaluation analyses, the Centre for Research on Health Equity and Social Inclusion ([CRHESI](#)) at Western University collaborated on [Homes4Women](#), a community pilot project that provides housing in London for women experiencing homelessness. The project yielded a better understanding of the barriers that women specifically face in accessing adequate housing, and raised important issues for implementing the 'Housing First' strategy with a gendered lens.

## Outreach

### Student Clubs

[UNICEF](#) Western club raised over \$10k in the past year through their event FAST 24, where participants fast for 24 hours and raise funds and awareness internationally for children and families in need. Other sustainability student groups at Western such as [WaterAid Western](#), Canadian Feed The Children, Save the Children, Habitat for Humanity UWO, and [Engineers Without Borders](#) develop solutions to local and global poverty, inequality, and sustainability issues.

### Community Legal Services

Operated by the [Faculty of Law](#) at Western University, [Community Legal Services](#) provides free legal services to low-income people in the community. The clinic is among the most progressive legal clinics in Canada and a leader in the cause of access to justice. For every academic year, services are provided by over 125 law students who work under the supervision of experienced staff lawyers.

### Western United Way Campaign

Western's [United Way campaign](#) aims to strengthen communities through donations and volunteerism.

Western University contributed \$635,357 from its 2021 campaign in support of United Way Elgin Middlesex, which funds more than 90 programs at 50 community agencies to help people in poverty. The campaign's focus includes strengthening families who are struggling with poverty, violence, and mental health issues.



5,700+ hours

devoted to community projects in 2018/2019 Impact Experience

17

Impact Experiences from London to Peru and Thailand



## Teaching

### Impact Experience

[Impact Experience](#) is an experiential learning program that offers all students at Western and its affiliated University Colleges access to unique co-curricular opportunities to support community projects around the world. Locations include [Hattiesburg, Mississippi](#), where students explore factors that link race and poverty, as well as [Ecuador](#), where students examine the pressures of the global food system on the livelihoods of rural and Indigenous communities. Students spend this six-month program partaking in leadership elements, workshops, pre-departure modules, and community service. 5,700+ hours

### Ivey's 39 Country Initiative

In 2020, [Ivey Business School](#) at Western University celebrated 10 years of the [39 Country Initiative](#) that has helped the world's poorest countries to advance their management education by decades. The initiative makes Ivey's case studies available for free to business schools in the poorest countries with the goal

and quality of education.

Ranked 1\* out of 769 institutions worldwide in the Times Higher Education (THE) Impact Rankings



Undergraduate courses at UWO related to create economic activity

198

SDG 1

## Operations

### Financial Support

In 2020-21, [Western provided \\$13.5 million in one-time funding to support students' financial needs](#) as a response to the COVID-19 pandemic. The funding was delivered through needs-based bursaries, work-study opportunities, summer research opportunities, and residence accommodation subsidies.

### Student Relief Fund

Western launched the [Student Relief Fund](#) in 2020 to provide critical resources to those students who were affected by the COVID-19 pandemic and find themselves with urgent expenses. Areas of assistance include travel, access to technology, and health and wellness.

### Students in Foster Care

In 2020, Western announced its commitment to support 20 former foster kids for post-secondary education through the Youth in Extended Society Care [https://registrar.uwo.ca/student\\_finances/youthextendedsocietycare.html](https://registrar.uwo.ca/student_finances/youthextendedsocietycare.html) program. The support includes covering full tuition costs, ancillary fees, and books & supplies.





2 ZERO HUNGER

## SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

### Research

#### Sustainable Aquaculture

Dr. Bryan Neff and his lab in the Biology Department are researching best practices for ethical and sustainable aquaculture by using advanced genetic techniques. [Neff's research](#) into breeding fish with greater growth efficiency reduces feeding costs by up to 25%. Alongside genetic research, the Neff lab is researching sustainable diets for aquaculture with the goal of replacing fish meal while maintaining high levels of omega fatty acids in the farmed salmon's diets, benefiting consumers and ultimately the health of our oceans.

#### Our Food Future

A new research collaboration between the Ivey Business School and Guelph-Wellington's '[Our Food Future](#)' project will investigate how businesses such as farmers, manufacturers and retailers can create opportunities from waste and establish effective circular supply chains. The collaboration will fund research on Guelph's circular agri-food system, which will help Our Food Future with the creation of 50 new circular businesses and collaborations along with a projected 50-per-cent increase in circular economic revenues. The initiative will be applicable across Canada's agri-food system, informing the growing number of local and national initiatives to reduce food waste and foster the circular economy.

Ranked 2<sup>nd</sup> out of 553 institutions worldwide in the Times Higher Education (THE) Impact Rankings

### Outreach

#### Community Gardens

Brescia University College at Western University is planting an on-campus [Community Garden](#) effective spring 2021. The Community Garden will help serve those facing food insecurity within the Brescia and London community – with a particular focus on women in need. King's University College also houses a [garden](#) where students and community members grow organic produce. In Spring 2021, with the support of Landscape Services and the Indigenous Student Centre, EnviroWestern planted a new garden. This new [community garden](#) [https://sustainability.uwo.ca/Campus/community\\_garden.html](https://sustainability.uwo.ca/Campus/community_garden.html) located near Western's greenhouses and many community members are accessing the garden.

#### Farmers' Market

[Hospitality Services](#) at Western has been hosting a weekly [Farmers' Market](#) since 2014 as a symbol of true food celebration where Western's community is encouraged to connect with local farmers. Students, faculty, and staff at Western can purchase the region's finest farm-fresh produce and locally made goodies like honey, jams, and baked goods.

#### Western Cares Food Drive

Western supports [London's Business Cares Food Drive](#) through the [Western Cares Food Drive](#) and contributed several thousand pounds of donations. Western students, staff, and faculty have been key partners in the drive for 15 years as Western Cares. Green bins to hold donations are located in the lobbies of more than 20 buildings across campus.

### Teaching

#### FRESH

Developed by graduate students enrolled in the [Masters of Food and Nutritional Sciences](#) program at Brescia, [FRESH](#) is a research-based, multi-strategy nutrition education program. The program is designed to increase awareness, build skills, reward healthy eating and influence the campus food service environment.

#### Food Skills for Life

The [University Students' Council \(USC\)](#), a student-led organization representing undergraduate students at Western, combats student food insecurity by hosting cooking workshops and demonstrations throughout the year that promote sustainable eating, such as the [Food Skills for Life](#) workshop. Students learn simple skills and tips to make easy dishes using ingredients that are affordable and locally sourced.



76 Undergraduate courses at UWO related to SDG 2



### Operations

#### Hospitality Services

Western's Hospitality Services (HS) is committed to operating a healthy and sustainable food system for the campus community. HS developed a [Sustainability Action Plan](#) in 2020-21 which incorporates sustainability in all aspects of its operation. Key goals include responsible sourcing, sustainable dining, and waste reduction.

#### Food Support Services

[Food Support Services](#) is a USC student service dedicated to reducing food insecurity among students, staff, and community members. The service provides education and awareness of issues such as food insecurity, hunger, and poverty in both local and global settings. Support includes an anonymous food hamper, where students can fill out a request form and receive a grocery bag, as well as a walk-in food bank available during operating hours.





## SDG 3: Ensure healthy lives and promote well-being for all at all age

### Research

#### Western Heads East

Western professor Dr. Gregor Reid's and Brescia professor Dr. Sharareh Hekmat's [research on the benefit of probiotics](#) led to the creation of probiotic yogurt as the focal point for the [Western Heads East \(WHE\)](#) program. Celebrating it's 20th year, WHE is now a collaboration between Western and African partners to enhance community health, economic development, and the empowerment of women in highly underserved areas of Sub-Saharan Africa through probiotic foods.

#### Researchers discover novel method to diagnose

**long COVID** Published in Molecular Medicine, researchers at Lawson Health Research Institute - Western University have found that patients with post-COVID-19 condition (long COVID) have unique biomarkers in their blood. The team is working on developing a first-of-its-kind blood test that could be used to diagnose long COVID. The discovery could also lead to new therapeutics for this condition.

#### The Drone Project

Researchers from Western are part of an international team that has led the first global test to use [drone technology](#) to aid in tuberculosis (TB) diagnosis and treatment in remote Madagascar. This methodology overcomes the infrastructure challenges prevalent in remote regions of Madagascar.

**Indigenous Planetary Health** Nicole Redvers from Western's Schulich School of Medicine & Dentistry heads transdisciplinary research into climate change and health with a focus on Indigenous medical knowledge. Her holistic approach addresses the impact of human disruptions on our earth systems and the resulting effect on all life on earth. As chair, Indigenous Planetary Health, Redvers' work will seek to re-establish and reconnect health and wellness systems to align with the planet's health through the lens of Indigenous traditional knowledge.

### Outreach

#### Canadian Centre for Activity and Aging (CCAA)

The [CCAA](#) is a unique, national research and education centre within the [Faculty of Health Sciences](#) at Western promoting physical activity and well-being for older adults. Its education and leadership training programs instruct thousands of individuals across Canada through exercise classes, conferences, certifications, and more to enhance the functional fitness of older adults at every level of mobility.

#### Internal Wellness Rewards Programs

Western launched the [Internal Wellness Rewards Programs](#) in 2021 to promote employees' participation in wellness events offered at Western. Using their LifeWorks account, employees can complete personal and corporate wellness challenges, such as [The 30-Day Coping Challenge](#), Yoga, and Wellness Walks to earn points for rewards offered by Western.

#### Peer Support Centre

The [Peer Support Centre](#) is a USC student-led initiative that aims to provide non-professional academic and mental health support to students. All volunteers are trained by mental health professionals in the model of peer-based support.

#### Sustainability in West Africa

A new team of researchers from Western University and West Africa will be working on a [project to improve social development](#) in struggling West African countries. Together, they will focus on areas such as better health, gender equity, empowerment of disadvantaged groups, good governance of land resources, and enhanced knowledge of sustainable agricultural practices.



### Teaching

#### Global Health Systems


The [Global Health Systems \(GHS\)](#) program is a one-year professional master's degree focusing on international health, particularly in marginalized populations. Students have opportunities to discuss solutions to issues in African and other low/middle-income countries while gaining the knowledge and skills to become leaders in this growing and dynamic field.

#### Global MINDS

[Global MINDS](#) program focuses on low/middle-income counties by specifically looking at local communities facing marginalization, especially in mental health inequities. The program offers the graduate seminar course "[GHS9014B: Global Mental Health System Innovation](#)" at Western University, and a year-long fellowship program. Students focus on the need for integration and intersection between different sectors in order to better address issues of mental health and substance abuse.

#### Master of Public Health Program

The [Master of Public Health Program](#) is a 12-month, case-based program. During the program, students learn from faculty from a wide variety of disciplines, participate in seminars and workshops, experience a 12-week practicum in Canada or around the world, and develop the skills needed to become a public health leader.

 **390**  
Undergraduate courses  
at UWO related to  
SDG 3

### Operations

#### Wellness Support

[Health & Wellness](#) provides free professional and confidential services to students who need assistance to meet their personal, social and academic goals. Services include consultation, referral, groups and workshops, as well as brief, change-oriented psychotherapy.

Western Health and Wellness has moved to a new home, consolidating all services under one roof in the freshly renovated Thames Hall. The \$20-million renovation project, driven by Western's Student Mental Health and Wellness Strategic Plan, aims to help students thrive personally, socially and academically. Having a single intake point for medical care, counselling services and wellness and equity education is a significant aspect of the centre's holistic, responsive care model. [Health and Wellness Centre](#)





## SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

### Research

#### Research Facilities

52 academic departments at Western are researching sustainability. Faculties engage with almost 350 different researchers across Ontario in varying disciplines with the hopes of emphasizing interdisciplinary collaboration to help address many of the sustainability issues the world faces today.

#### STEM and Social Skills (S3)

Western's [Faculty of Education](#) researchers developed the [STEM and Social Skills \(S3\)](#) program to support students with autism spectrum disorder (ASD). The program develops students' STEM knowledge through engaging and ability appropriate activities. The research aims to give students with autism proper STEM education and promote a STEM-informed workforce.

#### Stories Help Students Understand AI's Impact

Professor George Gadanidis from the Faculty of Education, and Dr. Janette Hughes from Ontario Tech University, have created [graphic stories about AI](#) to help students, teachers, and parents reflect on how it influences their lives. Their most recent story in 2021, Meehaneeto, is about a young girl who discovers the long-lost technology of her civilization, and looks at how her society transforms with the re-introduction of technology and AI.

### Outreach

#### Western Serves Network

The [Western Serves Network](#) aims to connect community organizations in the London area with the support they need. Western students are connected to the broader London community and non-profit organizations that work to tackle ongoing social issues. It provides the Western campus with a means to strengthen relationships with its community and to produce graduates that are productive and engaged citizens.

#### Indigenous Food and Medicine Garden

The [Indigenous Food and Medicine Garden](#) promotes Indigenous presence and knowledge exchanges while increasing Indigenous organic and sustainable food on campus. Opening in 2022, Western's new [Indigenous Learning Space](#) will provide a new home for the garden along with other indigenous learning initiatives.

#### Western Continuing Studies

[Western Continuing Studies](#) (WCS) provides opportunities for everyone to keep learning at Western University. From recent graduates, job seekers, and corporate clients, there is an array of choices for lifelong learning from a variety of programs, courses, and professional certificates.

**Professional Development** Western is committed to building culture and community by bringing staff and leaders across the university together for engaging professional development opportunities. Staff and Leader Learning Days and annual conference days promote learning and growth for all



 **127**  
Undergraduate courses  
at UWO related to  
SDG 4

### Teaching

#### Community Lectures

The Schulich School of Medicine & Dentistry at Western University is one of Canada's pre-eminent medical and dental schools. Schulich strives to maintain community health and wellness through [community lectures](#) such as [ExaminED](#) weekly lectures and [See the Line](#) concussion awareness presentations.

#### Study Programmes

Western's Faculty of Education is home to thriving research centres and internationally recognized scholars. This past academic year, [teacher candidates were placed in the Children's Aid Societies](#) (CAS) of Oxford and Huron-Perth, where they gained a deeper understanding of the adverse childhood experiences that can influence a child's ability to learn at particular times in their lives.

#### Centre for Teaching and Learning (CLT)

The [CLT](#) is the teaching hub of the university to support the university's teaching and learning mission by providing orientation, training, mentorship, research and innovation opportunities for instructors at Western. The centre is recognized nationally and internationally for its research-based practice; comprehensive teaching assistant and international graduate student programs; extended [teaching certificate](#) programs; and as the home of [The Canadian Journal for the Scholarship of Teaching and Learning](#).

### Operations

#### Western Library

With more than 12 million items – both in print and online – [Western Libraries](#) houses one of the largest collections in North America. The general public is welcome to visit Western Libraries and make use of most collections.

#### Student Awards and Scholarships

Western has nearly 1,800 [student awards](#), as well as internal scholarships, external scholarships and awards, academic merit scholarships, needs-based awards, and employee group scholarships.

#### Western Green Awards

The [Western Green Awards](#) promote enhancing sustainability in the Western and London community and were initiated to acknowledge community members who have made positive environmental contributions. By providing a financial incentive of \$1,000, the awards allow anyone with a passion for enhancing sustainability to improve the insight on the importance of sustainability among fellow members of their community.

**10 million**  
downloads on Scholarship@Western,  
Western's open-source repository of  
free-to-use multi-media for scholars  
across the globe





## SDG 5: Achieve gender equality and empower all women and girls

### Research

#### Gender-Based Violence

Dr. Nadine Wathen's interdisciplinary research examines how [gender-based violence](#) affects health and wellbeing. She addresses gender-based violence at multiple levels and works closely with shelters, health clinics, emergency services, and schools to support trauma and violence-informed and equity-oriented practices and policies.

Pictured below: Buildings throughout London, including University College, were lit up purple for the month of November as part of the London Abused Women's Centre campaign to bring awareness to the issue of men's violence against women. This past year, Western established a new Gender-Based & Sexual Violence Advisory Committee. New training was developed for all students, staff, and faculty.

#### Sexuality and Gender Research Group

The [Sexuality and Gender Research Group](#) brings together researchers from the [Faculty of Arts and Humanities](#) with scholars in other disciplines from around the university to discuss questions of sexuality and gender. Every year, the group hosts a number of academic talks as well as a Queer Research Day every April - a full-day event involving both papers and poster presentations.



### Outreach

#### Girls in Engineering

[Go ENG Girl](#) and [Go CODE Girl](#) are some of the community outreach programs offered by [Western Engineering](#) that provide interactive and exciting opportunities for girls in grades 7-11 to be introduced to engineering, coding, and related STEM fields. Girls learn about the world of engineering from female professionals, academics, and students.

#### Gender Equality Network

As part of a program promoting inclusivity, the [Gender Equality Network](#) at Western aims to educate about issues of gender equality and diversity through conferences, invited speaker series, and collaborative initiatives with other on-campus groups and community partners.

#### Empower Club

Students at [Empower Club](#) work to remove barriers facing underprivileged women in the London community, such as women who have experienced abuse, single mothers, and women experiencing homelessness.



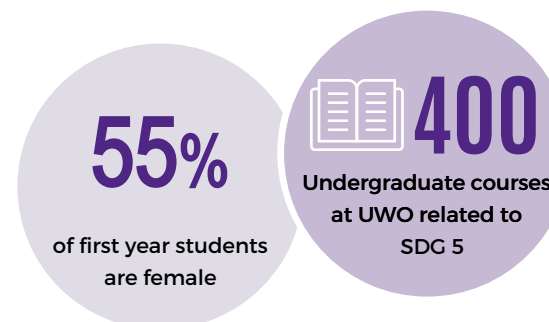
### Teaching

#### Student Programmes

The [Department of Gender, Sexuality, and Women's Studies](#) (GSWS) is a dynamic and interdisciplinary department that focuses on issues of social justice and equality. The department offers a variety of degree modules and promotes feminist scholarship through provision for resident scholars, a Distinguished Speakers Series, faculty colloquia, annual conferences, and publications.

#### Linamar Scholarship

The [Linamar Scholarships](#) at Western will support up to 10 female students in the dual degree program in [Engineering and Business](#) (BESc/HBA). The scholarship includes half of the tuition for all years of the dual degree program, summer co-op, and guaranteed employment.



### Operations

#### Trans Care Team

Recognizing the unique needs of gender-diverse students, the [Trans Care Team](#) comprises a group of clinicians who work together to provide specialized psychological counselling and medical care to students in an LGBTQIA2S+ affirmative environment. Clinicians received training from Rainbow Health Ontario, and are able to offer one-on-one and group counselling.

#### Parental Leave

Birth mothers and all other new parents are entitled to up to 61 weeks of [Parental Leave](#), with paid benefits depending on eligibility. Western also provides Supplemental Employment Insurance Benefits (SEIB). This paid benefit is designed to provide eligible faculty and staff members with additional funds.

#### Childcare Facilities

Western offers access to two [onsite childcare centres](#), the University Childcare Centre and the UCC Flexible Childcare. The childcare programs are licensed and monitored by the Ministry of Education under the Day Nurseries Act. The [Society of Graduate Students \(SOGS\)](#) at Western offers a childcare subsidy to offset the cost of child care services for graduate students.

#### Breastfeeding Stations

Western welcomes nursing mothers anywhere on campus. However, if a private space is preferred for nursing or extracting milk, two on-campus [nursing stations](#) are available. These areas provide seating in a private space. Western is also pleased to provide infant change tables in many campus buildings.





## SDG 6: Ensure availability and sustainable management of water and sanitation for all

### Research

#### WesternWater Centre

Launched in 2020, [WesternWater Centre](#) is an Engineering-based group researching real-life solutions for the management and treatment of water supplies. The centre addresses water issues, including recovering energy, phosphorus, organics and derivatives from wastewater, plastics removal, and recycling of industrial wastewater.

#### RESTORE Research for Subsurface

**Transport and Remediation** RESTORE conducts innovative research aimed at addressing the sustainable management of our water resources through the development of engineering technologies in addition to enhancing understanding of natural hydrogeologic systems. Key research areas include soil and groundwater contamination and remediation, surface-groundwater interactions and green roof technology. RESTORE combines state-of-the-art laboratories, field research, advanced computer modeling, and commercialization with national and international collaborations, and strong industrial partnerships to achieve research excellence. We strive to provide a unique world-class training experience through a fun and supportive group environment.

#### Testing Wastewater for COVID-19

Western engineer [Christopher DeGroot](#) led a study in 2021 where he collected wastewater samples from a number of strategic locations in London, ON and analyzed them at Western's ImPaKT Facility. Wastewater surveillance is a faster method of mapping community infection rates and acting as an early warning system for COVID-19 outbreaks in our community.

### Outreach

#### Student Clubs

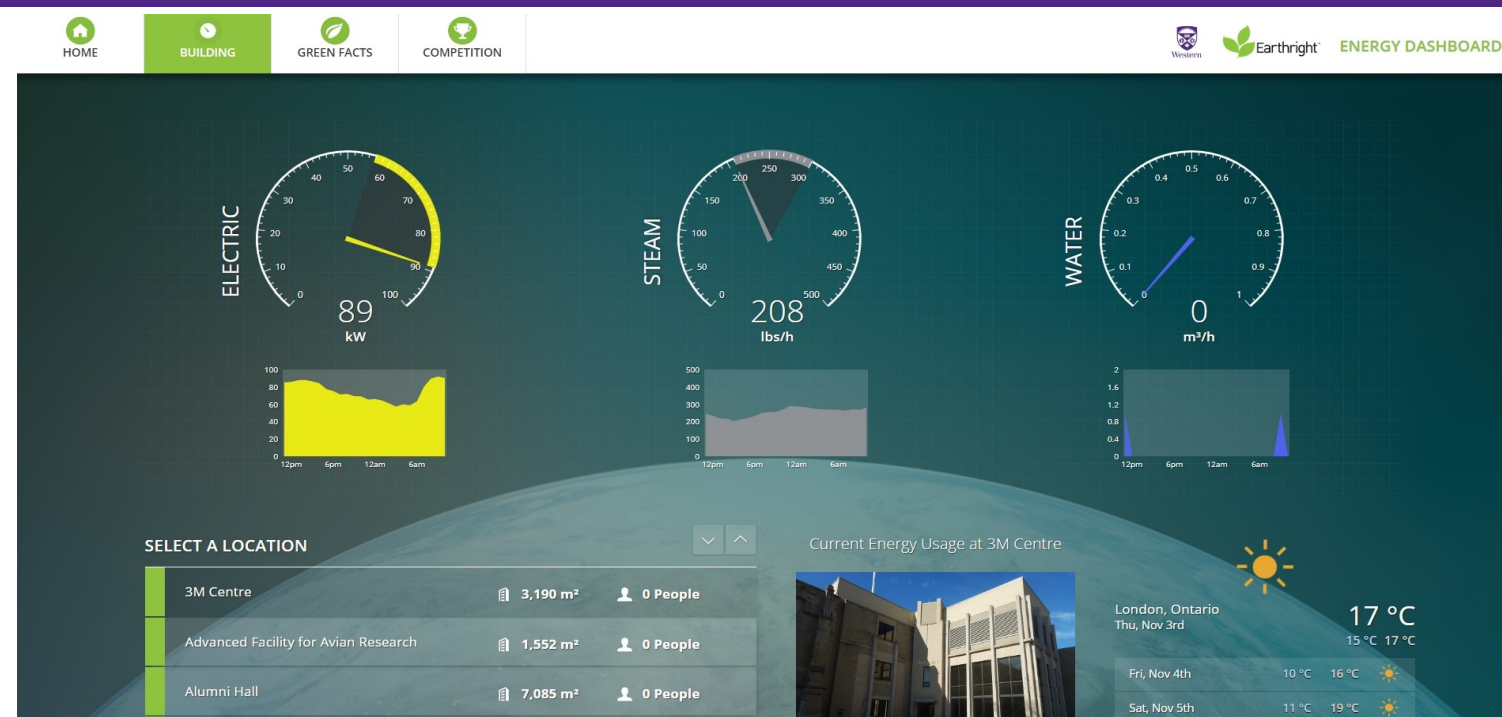
[WaterAid Western](#) aims to fundraise and bring awareness to making clean drinking water, reliable toilets, and good hygiene accessible to everyone. Having previously won Student Chapter of the Year in Ontario, [Western Water Chapter](#) also gives students the opportunity to explore the water industry.

#### World Water Day

Western celebrates [International World Water Day](#) with a different topic each year, where past years' events focused on Water and Food Security, as well as Water Cooperation. Informative booths and panel discussions are held on campus by some of Western's leading water researchers.

#### Green Office Program

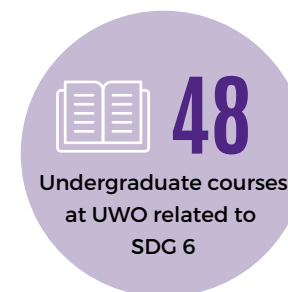
Western's [Green Office Program](#) helps on-campus offices identify areas of improvement with sustainability, tracking their progress, and celebrating achievements. Points are awarded for things such as having reminders posted near faucets to encourage water conservation and the use of reusable water bottles instead of disposable plastic bottles.



### Teaching

#### Study Programmes

The [Department of Civil & Environmental Engineering](#) offers courses in drinking water treatment at both undergraduate and graduate levels. Students can explore specialized courses including water resources management, wastewater treatment, hydrology, and groundwater modelling.



Students interested in gaining international knowledge have the opportunity to participate in active programs of valuable collaboration with Mexico and Africa via the Institute of Advanced Studies Canada-Mexico and the Civil and Environmental Engineering International Development program. These exceptional undertakings principally address the implementation of water purification in conjunction with new semiconductor materials.

### Operations

#### Water Meters

Eighty-eight newly installed water meters provide real-time data for Western's [Energy Dashboard](#) (pictured above). Through effective demand management, Western's water intensity has dropped by 14% since 2012.

#### New Resident Faucets

To promote the importance of conserving water, hundreds of [low-flow faucets and showerheads](#) were installed at Western residences. These new faucets use approximately 30% less water compared to the old faucets, saving thousands of cubic metres of water per year.

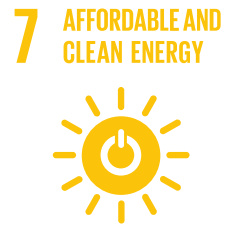
#### London Wastewater Facility (LWF)

Located at London's Greenway Pollution Control Plant, the [London Wastewater Facility](#) is a partnership between Western University and the City of London. The unique facility provides unprecedented access to real-time municipal wastewater and a variety of process streams for full-scale testing and demonstration of new wastewater treatment technologies.



**175**  
bottle filling stations on campus, with more being installed





## SDG 7: Ensure access to affordable, reliable, sustainable and modern energy

### Research

#### Ivey Energy Policy and Management Centre

The [Energy Policy and Management Centre](#) is an informative and trusted voice on Canadian energy policy matters in support of a thriving Canadian economy. Among its research initiatives in the last year is the Investment in [Canada's Clean Energy Technology Sector](#) policy brief, which is an in-depth assessment of the climate for investment in clean energy technology industries in Canada based on data from an online survey of senior energy sector executives conducted in late 2020.

#### Big Data Project Lights Path to Energy Savings

A big-data approach led by Western Engineering researchers is helping utility providers modulate the highs and lows of demand and production, while also planning for a greener future. [The \\$3-million project](#) with six partners could transform how utilities around the world predict and share energy use and supply. The program enables customers, large and small, to share their data with secure, private third-party apps and better predict and save on utility costs, as well as understand how to minimize greenhouse gases and use resources responsibly and sustainably.

### Outreach

#### Green Building Tours

[Green Building Tours](#) are a great way to get an in-depth look at what makes Western's LEED-certified green buildings sustainable. Tours are open to campus community members as well as the general public. During the tours, discussions of sustainability and environmental initiatives are encouraged. All major renovations and new buildings on campus must also result in green buildings.

#### Residence Powers Down Challenge

The [Residence Powers Down Energy Challenge](#) is a challenge to reduce energy consumption amongst Western's residences that takes place annually. The challenge was developed to prepare students as they leave campus and become renters, paying their own utility bills and being aware of energy conservation. Students in residences are challenged to out conserve each other and the winning residence is given 50% of the savings!

#### Student Energy at Western University (SEWU)

[SEWU](#) seeks to provide students with the knowledge, connections, resources, and practical experiences that will inspire and empower them to lead the just transition to a sustainable energy system.

At Western, SEWU has hosted a model energy policy negotiation and climate simulation, movie night on fusion energy featuring a Q&A with leading international researchers, and hosted Western's first pitch competition for solutions to help the university achieve carbon neutrality. SEWU has also led a number of advocacy, education, and service initiatives.



86

Undergraduate courses  
at UWO related to  
SDG 7

### Teaching

#### Study Programmes

The [undergraduate programs in Environmental Science](#) at Western exposes students to environmental issues ranging from biodiversity loss, energy, renewable resources, to natural disasters, and sustainable business practices. Students can also pursue their [Master's in Environment and Sustainability Program \(MES\)](#). Students from other disciplines also explore energy and its various forms of existence in various courses, such as the "Conventional, Renewable and Nuclear Energy" course from the Faculty of Engineering, which allows students to discuss general energy and environmental issues facing our society.

#### Sunstang Solar Car Project

[Sunstang](#) is a solar car project that involves students of all disciplines and faculties, and challenges students to incorporate the typical mechanical aspects of a car with customized electrical systems and solar panels to create a futuristic, eco-friendly, and competitive vehicle that can be raced at worldwide solar challenges. Every component of the Sunstang car is designed, prototyped, and assembled by our members.

### Operations

#### First Net-Zero Energy Building

[Western Entrepreneurship and Innovation Centre](#) is a new building set to become Western's pre-eminent interdisciplinary entrepreneurial space. Work on the building starts in summer 2021 and features will include being Western's first net-zero energy building, having geothermal (ground-source) heat and cooling, green roof, triple-glazed windows; courtyard opens into the great hall and event spaces, and windows with generous use of natural light and space.

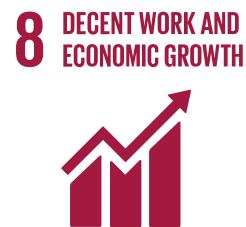
#### Energy Conservation on Campus

[Facilities Management \(FM\)](#) at Western University broadens the approach to mitigating consumption during peak energy demand days throughout the summer by dialling back the air when the provincial drain on energy reaches its peak. This led to electricity savings of roughly \$2 million for each of the last few years.

Western University will achieve  
net-zero emissions by

2050





8 DECENT WORK AND ECONOMIC GROWTH

## SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

### Research

#### Centre for Human Capital and Productivity

Researchers at Western's [Centre for Human Capital and Productivity \(CHCP\)](#) study a wide range of issues related to human capital and productivity. The 2021 CHCP Working Paper "[Four Decades of Canadian Earnings Inequality and Dynamics across Workers and Firms](#)" examines the evolution of individual earnings inequality and dynamics in Canada. The paper collected statistics on earnings inequality, volatility, and mobility from 1983 to 2016 for Canadian tax filers. CHCP researchers have also played an important role in the design of three major surveys in Canada, the U.S., and China. Surveys designed include Canadian Household Panel Survey, The Berea Panel Study, and the Chinese Household Income Project.

#### Social Science Career Apprenticeship (SSCA)

New Western graduates will receive more local career opportunities, and London will retain more skilled talent, thanks to a new collaboration between the university and the London Economic Development Corporation. The [Social Science Career Apprenticeship](#) pilot program will help graduates from the [Faculty of Social Science](#) get a foot on the employment ladder by creating 12-month, full-time, paid apprenticeship positions for May 2021.

### Outreach

#### CommunityShift™

Founded by KPMG Enterprise and Ivey Business School, [CommunityShift™](#) offers deep experiential learning and networking for C-level leaders of Canadian charities and not-for-profit organizations. CommunityShift™ is a rigorous 6 half-day program for 35 of Canada's not-for-profit leaders. Top faculty and outstanding guest speakers will challenge participants to share experiences, learn from each other, and apply the learning back to their own organization.

#### Living Well @ Western

Operating since 2015, [Living Well @ Western](#) showcases how the well-being of faculty and staff remains a priority for the university. The campus-wide initiative is designed to promote physical, cultural, and intellectual activities to foster health and wellness, and has developed a series of free activities including yoga, Full Body Bootcamp, Pilates, meditation, Kick-FIT, and Zumba. Wellness coaches also visit workplaces on campus to offer customized wellness activities, including massage for hands and feet, and stretching exercises.



441

Undergraduate courses  
at UWO related to  
SDG 8

Western among the  
**Top 50**  
Canadian workplaces  
according to Forbes

### Teaching

#### Centre of Research and Education on Violence Against Women and Children (CREVAWC)

[CREVAWC](#) at Western University is providing domestic violence training for federally regulated employers and their employees. In partnership with the Canadian Labour Congress and the Federally Regulated Employers, a website, [www.DVatwork.ca](#), has been created to provide tools, training and resources to address the impacts of domestic violence in the workplace.

#### Study Programmes

The [DAN Department of Management & Organizational Studies](#) at Western provides a unique interdisciplinary approach to the study of management, emphasizing the social science and evidence-based foundations of management education. The undergraduate program is one of the first to provide an evidence-based approach to the study of management, where students explore courses such as Equality in the Workplace and Professionalism & Ethics.



### Operations

#### Western's First EDI Council

In 2021, Western University named its first-ever [equity, diversity and inclusion \(EDI\) advisory council](#). Among council's initiatives are training and educational programs on employment equity & diversity, as well as employment outreach initiatives. Western announced its \$6 million investment to support EDI in the summer of 2021.

#### WE SPEAK

With the goal of making Western a great place to work, the [WE SPEAK](#) survey for faculty & staff helps Western to identify strengths, weaknesses, and opportunities for improvement. More than 3,800 Western faculty and staff members took part in the 2020 survey. This survey runs every three years with the next iteration launching in Winter 2023.

#### Fair Trade

As a commitment to responsible sourcing, Western received its [Fair Trade](#) designation in 2015. There are multiple fair trade loyalty programs to incentivize fair trade purchasing on campus.

**\$6 mil**

invested to support new EDI  
initiatives





## SDG 9: Build resilient infrastructure, promote sustainable industrialisation and foster innovation

### Research

#### 3D Printing in Space

With the goal to build infrastructure on Mars, Western engineer Jun Yang is currently perfecting artificial intelligence-enhanced methods for [3D printing in outer space](#). The idea is to print the heavy, bulky equipment necessary for repairs and experiments using locally available materials. Dropping even a small amount of the payload's weight in a rocket's mass by ditching some equipment can substantially cut back on fuel. This not only reduces costs, but it also reduces the environmental footprint of rocket fuel.

#### 5G-Connected Research Centre at Western

Launched in 2020, the [5G-Connected Research Centre](#) at Western is bringing together cutting-edge technology with research aimed at helping students thrive during their time at university. In partnership with Bell, Western is the first university in Canada testing 5G capability using 3.5 GHz 5G spectrum in pre-commercial mode. It is the beginning of a \$2.7-million project to deploy 5G network infrastructure throughout the Western campus. The first 5G site on campus is designated for research now, but by the summer of 2021, a full network is expected to be available across campus.



### Outreach

#### WISE

[Western's Ideas for Sustainability and the Environment \(WISE\)](#) competition was established to foster innovative and high-impact ideas that reduce or eliminate today's most pressing environmental concerns. The competition allows Western students to generate ideas around the topic of sustainability. By addressing an idea surrounding the three pillars of sustainability (people, planet, and profit), students or groups of students can win a prize of \$1,500. These ideas in the future will potentially enhance Western's sustainability practices.

#### WORLDdiscoveries

Born out of a partnership between Western University, Robarts Research Institute and Lawson Health Research Institute, [WORLDdiscoveries](#) draws upon a mix of industry connections, sector-specific market knowledge, and business development expertise, to help researchers and local inventors commercialize their discoveries through licensing and new company spin-offs. WORLDdiscoveries operates as a department of Western University and works with collaborators - locally and internationally - who are committed to the timely transfer of innovative research products and services to the community for the benefit of all.

Through WORLDdiscoveries:

**50 & 207**

active spin-off companies    active licenses

351

Undergraduate courses at UWO related to SDG 9



### Teaching

#### Western Morrisette Institute for Entrepreneurship

One of Southwestern Ontario's most active startup accelerators, the [Morrisette Institute](#) provides a co-working space, seed funding, mentorship, and training events and workshops for startups. The institute offered the [Master the Entrepreneur Skillset](#) course in 2020, a free six-week virtual masterclass that more than 2,000 Western community members from around the world registered for.

Through a gift from Pierre L. Morrisette Family Foundation as well as Western, a new investment of \$8 million has been announced in 2021 to expand entrepreneurship opportunities at Western.

#### Civil & Environmental Engineering

[Civil & Environmental Engineering](#) students can specialize in [International Development with Structural or Environmental Engineering](#) where they are introduced to the complex societal, environmental, political, and economic issues associated with building safer communities in Canada and in the developing world. The program also includes the Summer Community Development Placement and Design Project where students have an opportunity to work for four months in developing countries, or in-need communities in Canada.

### Operations

#### Efficiency Upgrades

Western has implemented many [efficiency upgrades](#) on campus that have reduced energy consumption, such as:

- Renovations and efficiency upgrades of older buildings such as the Physics & Astronomy Building, Westminster Hall, and Althouse College.
- The elimination of all domestic water-cooling use in laboratory equipment, coolers, and research equipment.
- Daylight sensors and auto-dimming features to reduce artificial indoor lighting in some buildings on campus.
- Switch to LED lighting for exterior and interior lighting in some areas.

#### Renewable Energy

Western uses [solar power generation](#) through its investments into LEED-certified buildings and solar-powered LED lamps on campus. The [Amit Chakma Engineering Building](#) is a great example, as the building boasts an impressive solar array that offsets much of the building's energy needs. In September 2020, 2.5% of assets were invested into a renewable infrastructure fund as the first part of shifting part of the Operating & Endowment Fund into sustainable investment strategies to reduce the carbon footprint of the Fund.





## SDG 10: Reduce inequality within and among countries

### Research

#### Social Inequalities Across Families

Western's Department of Sociology researcher Dr. Kate Choi believes that gaining insights about the social processes generating inequalities across families can help reduce inequalities in future generations. Choi's current project, [The Canadian Neighborhood Project](#), examines the role of neighbourhoods in shaping our health and wellbeing. It investigates the impact of neighbourhood contexts in determining the spread of COVID-19, the interdependencies between residential and socioeconomic assimilation of immigrants, and the role of the housing market in generating socioeconomic inequalities by race, immigration cohort, and nationality.

#### The Centre for Research on Social Inequality (CRSI)

[CRSI](#) at Western, a research centre in the Faculty of Social Science, promotes and supports innovative social science research in social inequality. The primary objectives of CRSI are to promote and support multidisciplinary research through collaboration on research projects and grants, dissemination of findings to academics, policymakers, and the general public, and provide mentoring and training to undergraduate and graduate students interested in social inequality. Current projects focus on earnings inequality, family dynamics, and public charter schools effect on residential racial/ethnic segregation.



### Outreach

#### International Week

Held every year, [International Week](#) is an event focused on an inclusive, globally aware campus, with the goal of celebrating Western's international community, diversity and international collaborations. Events through the week engage students, faculty, and staff in discussion and debate about international issues, and encourage learning about international education, intercultural skills, and cultural traditions and activities. Past events held include a Cultural Cooking Competition, "Why Equity, Diversity and Inclusion Matters at Western" keynote session, and a Virtual Go Abroad Fair student panel.

#### BrainsCAN

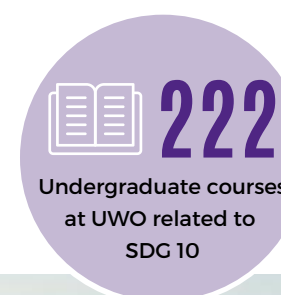
[BrainsCAN](#) is a cognitive and behavioural neuroscience research initiative at Western, with a commitment to improving the representation of marginalized groups in neuroscience. BrainsCAN's [Diversity in Neuroscience Summer Internship](#) provides students interested in cognitive neuroscience, who self-identify as Black, Indigenous, LGBTQ2S+, people with a disability, and women, an opportunity to have an immersive experience in a research environment. Students participate in research projects assigned by the supervising faculty member, as well as virtual workshops focusing on the development of research and professional skills.

### Teaching

#### Study Programmes

Western Education's [Master of Professional Education](#) gives students the opportunity to specialize in the field of [Equity, Diversity, and Social Justice](#). The courses in this program build a deeper understanding of major equity concerns in education, with a focus on building capacities for critical reflection, particularly in terms of infusing equity into everyday practices in education and policy contexts.

The [Collaborative Specialization in Migration and Ethnic Relations](#) at Western brings together graduate students and faculty to study questions of migration, ethnic relations, cultural diversity, conflict, acculturation and the integration of migrants, from the perspective of various social science disciplines.



### Operations

#### Equity & Human Rights Services (EHRS)

[EHRS](#) at Western provides information on the University's discrimination and harassment policies, employment equity and diversity, and other human rights-related issues. EHRS provides information, education, and training on human rights and equity issues to all members of the Western community. If a person has experienced, witnessed, or been told about actions that may relate to discrimination and/or harassment, that person may request a confidential consultation with EHRS.

#### Indigenous Strategic Initiatives Committee

Indigenous Services has created Western's [Indigenous Strategic Initiatives Committee](#) which comprises Western's first-ever multi-year [Indigenous Strategic Plan](#). This will aim to enhance Indigenous teaching and learning opportunities among students, begin to indigenize Western areas for Institutional Practices and Spaces, increase Indigenous representation in faculty, staff and administration, and achieve excellence in Indigenous research.

Set to open November 7 2022, Western's [Indigenous Learning Space](#) will act as a home-place for Indigenous learning initiatives at Western, and a touchstone for Indigenous and non-Indigenous peoples to gather and learn together, building relationships in the spirit of reconciliation, decolonization and Indigenization.

*Outdoor Rendering for Indigenous Learning Space*



# SDG 11: Make cities inclusive, safe, resilient and sustainable

## Research

### Human Environments Analysis Laboratory (HEAL)

Established by Department of Geography's professor Dr. Jason Gilliland, the [Human Environments Analysis Laboratory \(HEAL\)](#) works on many projects with a focus on sustainable cities and communities. Gilliland's 'Active and Safe Routes to School' project is a community-based initiative that promotes the use of active transportation to and from school. While 'Cycling & Healthy Cities', focuses on cycling infrastructure and the impacts of cycling and e-bikes on public health and sustainability.

### Helping London Homelessness

Western researcher Carrie Anne Marshall led a community-based participatory research project aimed to identify the strengths and challenges of the system currently offered to individuals leaving homelessness in London, and to inform new strategies and/or build on existing supports. Published in June 2021, the [Transitioning from Homelessness Project](#) was funded by a Canadian Institutes Health Research grant.

## Outreach

### Centre for Urban Policy and Local Governance

Western's [Centre for Urban Policy and Local Governance](#) responds to many new challenges that face local governments and urban policymakers. The centre brings together academic researchers and students from across Western and beyond with the goal of facilitating new interdisciplinary collaborations on pressing questions to create discussion between academics and policy practitioners

### Transforming Emergency Shelter into Affordable Housing

Abe Oudshoorn, Western Nursing professor and member of the Mayor's Advisory Panel on Poverty, is leading a demonstration project with the Salvation Army Centre of Hope in [transforming emergency shelter space into affordable housing](#) with supports. The project includes evaluation of an existing floor of rental units on site, as well as the addition of a new floor of units focused on substance use recovery and inclusive of a peer support model. This demonstration project aims to showcase how emergency shelters can successfully transition to providing affordable housing with support functions.



Centre for Urban Policy and Local Governance



350

bicycle racks  
strategically located  
on campus

147

Undergraduate courses  
at UWO related to  
SDG 11

## Teaching

### Centre for Sustainable Curating at Western

Launched in May of 2021, Western's new [Centre for Sustainable Curating](#) looks to shed light on ecological issues and share them through stories grounded in environmental awareness. Located in the department of visual arts, the teaching and research hub focuses on environmental and social justice and developing exhibitions and artworks with low carbon footprints. The museum and curatorial studies curriculum will include a Curating with Environmental Awareness course by 2023.

**\$29+ mil**

University expenditure on arts  
and heritage in 2021



Centre for Sustainable Curating

## Operations

### Summer Shakespeare at Western

In the summer of 2021, the 41st running of [Western's Summer Shakespeare](#) will be part of a global initiative, Cymbeline in the Anthropocene, which relates ecological values in the play to local environmental conditions in the hope of opening audiences' imaginations to new biocentric and biospheric horizons. This modern-dress version of Shakespeare's historical romance brings to the foreground the necessity of environmental stewardship, creating a performance perfect for a summer evening.

### Transportation On Campus

A few of the sustainable transportation initiatives across campus include:

- [Electric vehicle \(EV\) charging stations](#) are available at three locations across campus.
- The subsidised [bus pass](#) program provides unlimited bus transportation to all full-time students.
- As identified in the [Open Space Strategy](#), our active transportation-friendly campus has continuous improvements being made to the path network.
- [Western Active Transportation Society \(WATS\)](#) is a Western community group of faculty, students, and staff who are passionate and dedicated to active transport at Western.
- In 2020, Western installed a secure and enclosed [Bike Shelter](#) that can accommodate up to 60 bikes.



## SDG 12: Ensure sustainable consumption and production patterns

### Research

#### Institute for Chemicals and Fuels from Alternative Resources (ICFAR)

Western's [ICFAR research facility](#) develops and brings together top talent from academia, government, and industry to collectively accelerate innovation, driving Canada towards a profitable and sustainable future. Researchers explore ways to reduce our carbon dependence and use alternative energies more efficiently, develop innovative, environmentally friendly chemical processes and nanomaterials, and use solar energy to remove pollutants from air and water.

#### Bio-cement Against Potential Disasters

Western Engineering team led by Abouzar Sadrekarimi created a [bio-cement that improves the structural integrity of the ground](#), which can be used to stiffen sands around the Fraser River in British Columbia. The bio-cement could help address issues related to earthquakes, slope failures, and sinking foundations. The soil would reduce the cost of structures, and it is also a natural way of mitigating risk as it uses inert chemicals and microbes already found in the soil.

### Outreach

#### Enviro Western

[EnviroWestern](#) is a student service that seeks to promote environmental sustainability at Western by leading events and initiatives to enhance student awareness of environmental issues on campus. Their projects include:

- maintaining an outdoor garden and a greenhouse that grows fresh organic vegetables year-round
- giving away reusable and environmentally friendly merchandise to students, such as reusable water bottles, mugs, and grocery bags
- hosting an annual Food for Thought Gala that provides education on food sustainability
- organizing EnviroWeek which raises awareness of various environmental issues throughout campus

#### WWF-Canada's Living Planet @ Campus

Addressing issues like biodiversity loss and climate change, [WWF-Canada's Living Planet @ Campus](#) program helps students bring environmental sustainability and conservation activities to life on their campus and in their lives. Students can contribute to positive change through activities like campus clean-ups and Earth Hour, create habitat for wildlife through native plant gardening, and apply for funding to kickstart their own projects that help nature thrive.



### Teaching

#### The Sustainability Guide

The [Sustainability Guide for the Western Community](#) was put together by graduate students from the 2021 Masters of Environment and Sustainability class. This guide provides tangible and accessible sustainable lifestyle recommendations to Western students, staff, and faculty. The Detailed Guide discusses seven topics pertaining to sustainability, including waste, food, shopping, energy and water, transport, community, and green spaces. Within these various topics, each section presents useful solutions for moving towards sustainable lifestyle changes.

#### Chemical and Biochemical Engineering

Students in the [Chemical and Biochemical Engineering](#) undergraduate program at Western are trained engineers with skills to develop holistic solutions for clean water and air, carbon reduction, cleaner renewable fuels, and life-saving medicine. The capstone fourth-year design course involves students finding solutions to industrial problems in close cooperation with industry.

### Operations



In 2018, Western became the first university in Canada to become a [Bee City Campus](#).

The designation recognizes communities that establish healthy pollinator habitats and communicate their importance with the community. Great Hall Catering maintains honeybee hives on campus, from which honey is used in various recipes, made available for tea and coffee, and also bottled for sale.

The major supplier of seafood for Residence Dining, High Liner Foods, has pledged to have all responsibly sourced products, and currently, 99% of their seafood supply comes from certified sustainable or responsible sources.

Residence Dining serves approximately half of their entrees meatless. Of these options, half are completely vegan.

Western's Power Plant uses a multi-purpose greywater system which has mitigated 10M-litres of municipal water since 2017. Water used to rinse equipment is captured and reused for blowdown tanks, chilled water make-up, and other auxiliary services.

Landscape Services continues to reduce the number of high-water requirement plantings. The team has decommissioned many irrigation systems in mature landscaped areas where native species have become established.

#### Did you know...

Western diverts approximately 2.6 million pounds of material from the waste stream to a renewable resource each year





## SDG 13: Take urgent action to combat climate change and its impacts

### Research

#### Solid-State Battery Research

Engineering professor Andy Sun's latest partnership with a Beijing battery research company looks at solving critical and long-standing problems with battery life and safety by working towards [solid-state batteries](#) – all in an effort to fight climate change and reduce greenhouse gas emissions. The 5-year agreement plan started in 2018 at the newly opened GLABAT Solid-State Battery Inc., located in the Western Research Park. Sun hopes that these next-generation batteries will have a significant impact on everything from vehicles to everyday items such as phones and laptops.

#### Wind Engineering & Natural Disaster Mitigation

The [Wind Engineering, Energy and the Environment \(WindEEE\) Institute](#) at Western is home to the world's first three-dimensional wind-testing chamber, allowing scientists to address important scientific, economic, and societal challenges related to wind while evaluating energy potential and damage risks.

The [Institute for Catastrophic Loss Reduction](#) at Western is a world-class centre for multidisciplinary disaster prevention research and communications that brings together scholars, insurance companies, and other partners. Its members develop prevention programs, increase public awareness of findings and provide advice about preventing disaster losses.

### Outreach

#### Western's Net Zero

##### 2020 Pitch Competition

Contributing to Western's zero-emissions goal, Western's first [Net Zero Pitch Competition](#) provided an opportunity to develop sustainable solutions to issues faced by Western's Facilities Management. Students passionate about climate change competed for cash prizes, and took part in networking opportunities with a range of panellists and professionals from a variety of industries, bringing perspectives on sustainability.

#### Multi-hazard Risk and Resilience Group

The [Multi-Hazard, Risk and Resilience Group](#) gathers researchers from different Departments and Faculties at Western and aims to address national and global challenges related to disaster risk reduction against natural catastrophe. The group holds conferences and workshops to engage key stakeholders from government/municipality and industry in discussions about disaster risks, such as the workshop on Ontario's Harmonized Heat Warning Information System held in May 2020, and the Western-ICLR Multi-Hazard Risk and Resilience Workshop held in November 2019.

#### Climate Resilience Key in Pandemic Recovery

Western geography and environment professor emeritus Gordon McBean collaborated with an interdisciplinary research team to develop a new report for the federal government titled, "[Building Climate Resilient Communities](#)". The report assessed the threat of climate change and how communities across Canada could proactively advance climate resilience to effectively reduce the risk of adverse climate impacts, loss and damage. The initiative was among nationwide research projects that earned a Knowledge Synthesis Grant by Social Sciences and Humanities Research Council (SSHRC) in 2020.



Canada's only  
graduate program in  
**Wind  
Engineering**

### Teaching

#### Study Programmes

A new major at Western, [Climate Change and Society](#), integrates science, social science, and the humanities and aims to harness that passion and help students address the challenges the climate crisis poses. Launching in the department of geography and environment in the fall of 2021, the program's course modules will also to other post-secondary institutions and interested government organizations and community groups.

Students in other departments also examine climate change at global and regional scales, as in the course Global Climate-Change Politics where students explore international climate change negotiations, or the course Climate Change, which explores the impacts of natural and human-induced climate change on the environment.

#### New Course Offerings

Western's new course, [Indigenous Peoples, Globalization and the Environment](#), is an examination of natural resource development emphasizing the interplay between Indigenous peoples, the state, and international developers. The [Environmental Science and Sustainability](#) course is open to all students and provides an overview of the science underlying key issues (e.g., climate change, loss of biodiversity, and ecosystem function, air, and water pollution, and resource use) and how each issue impacts environmental sustainability from the local to global scale.

### Operations

#### Towards Western at 150

Released in the summer of 2021, Western's new strategic plan, [Towards Western at 150](#), targets sustainability as one of its overarching themes. Among new commitments is reducing carbon emissions for campus operations by 45% by 2030 and net-zero by 2050, as well as launching a new biodiversity project that will bring together our expertise in ecology with the teams that care for the campus and environs.

#### Investing to Address Climate Change: A Charter for Canadian Universities

In 2020, Western has joined more than a dozen research-intensive Canadian universities as a signatory to Investing to [Address Climate Change: A Charter for Canadian Universities](#). To battle climate change through sustainable investing, each of the charter's signatory universities will set an institutional framework for strategies that measure, evaluate and shift investments to reflect environmental impact.

**226**  
Undergraduate courses  
at UWO related to  
SDG 13





## SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development

### Research

#### Mercury in Watersheds

Brian Branfireun and his research group in the Department of Biology are investigating the landscape processes that take mercury from the atmosphere, process it through organic matter cycling, and finally export it to streams, rivers, and lakes. His work on the [processes that affect mercury movement in watersheds](#) is linked to fish and other aquatic organisms through collaborative partnerships with other researchers, government agencies and local communities. The Branfireun group is contributing data that will allow for the development of predictive landscape models to help assess in which watersheds fish will be more susceptible to mercury accumulation, guiding policies about mercury risk in the multitude of lakes found in Canada's north.

#### Freshwater Fish Health

Western professor Bryan Neff is one of the principal investigators with the newly formed [GEN-FISH](#) team from 13 academic institutions. The team works to determine the location and abundance of Canada's freshwater fish species, and measure how they are performing in the face of increasing stressors. Neff and his students will estimate changes in population abundance for key freshwater fish, a huge benefit for fisheries management and conservation programs in planning future needs.

### Outreach

#### Marine Biology Society

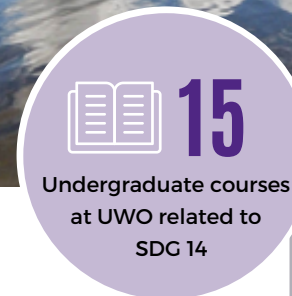
The newly formed [Marine Biology Society](#) at Western is a student group focused on raising awareness for issues facing marine life, including plastic pollution, global warming, and oil spills. This year, they are planning to organize online events with marine biologists all across the world, connecting students with internships and other opportunities to do real-life research on marine species. The group also plans to host conservation-based events with other clubs that focus on living a sustainable lifestyle.

#### The Canadian Conference for Fisheries Research

Recently held at Western University, the [Canadian Conference For Fisheries Research](#) is a national conference bringing together diverse research on a variety of topics and projects within Fisheries including the science, management, and issues facing our waters and resources today. The conference features diverse and discrete symposia dedicated to unique scholarly issues and discussions, and the panel discussions provide opportunities for current students and recent graduates to engage in discussion with early-career scientists and professionals.

#### Western Science Speaks Podcasts

[Western Science Speaks Podcast](#) is a short format interview show exploring work at the Faculty of Science. The show covers a wide range of topics in science relevant to a broad spectrum of listeners, such as environmental sustainability. Among their latest episodes is "Sharks Get Lonely Too" featuring Paul Mensink, a marine ecologist from Western's Department of Biology, who tracks sharks that have strayed far away from their natural habitats in order to cope with unsustainable conditions brought on by humans.



### Teaching

#### Marine Biology Field Course

Students who wish to learn more about marine environments can enroll in an [Environmental Studies in Marine Biology field course](#) at the Bay of Fundy in New Brunswick. Students study marine birds, mammals, and fish as their lean important oceanographic field techniques and the impact that human activities have had on this ecosystem. Students are also able to develop several skills including oceanographic sampling, surveying, organism identification, quantitative ecological sampling, experimental design, and fundamental data analysis.

#### Campus Eateries

Serving handcrafted sushi on campus, [Bento Sushi](#) is proud to be the largest Marine Stewardship Council (MSC)-certified restaurant chain in Canada, where their package is also produced locally and fully recyclable. The campus eatery is also a recognized partner of SeaChoice, Canada's most comprehensive sustainable seafood program.



### Operations

#### Blue Community

Brescia University College renewed its dedication to environmental sustainability by [banning water bottle sales](#) on campus as of September 2021 and becomes the first university in Ontario to be awarded the Blue Community certification.

To cut down on plastic waste produced by on-campus food vendors, Western University started using paper straws exclusively at its residence and in-house food service vendors in the fall of 2018. King's University College at Western also committed to reducing single-use disposable plastics at the same time.







## SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss

### Research

#### Forest Fire Prediction

Douglas Woolford's research group in the Department of Statistical & Actuarial Sciences are using modern data science to better understand wildland fires. They are able to use complex data structures to gain an understanding of patterns in key characteristics of wildfire regimes and integrate that knowledge into wildfire management. The [Woolford Wildland Fire Science Lab](#) develops models to create risk maps which can help predict where fires may occur given current weather conditions. The Ontario Ministry of Natural Resources and Forestry has been using their models to create fire occurrence prediction maps daily through recent fire seasons.

#### Effects of a Warming Climate on the Boreal Forest

Danielle Way from the Biology Department leads a lab group researching the myriad [effects of a warming climate on the boreal forest](#). Her team works at Western's [Biotron Experimental Climate Change Research Centre](#) where they can mimic future predicted climate conditions, including warmer temperatures and high atmospheric CO2 concentrations, and examine how boreal trees will fare over the coming century. Way's team is currently collaborating with the Canadian Forestry Service, as well as the US Department of Energy on a multi-million-dollar project to study increasing temperature and CO2 effects on living, mature boreal species.

### Outreach

#### EnviroCon

[EnviroCon](#) is an interdisciplinary conference organized annually by students of the Collaborative Graduate Program in the Centre for Environment and Sustainability at Western University. The free conference hosted in March of 2021 provided a forum for a broad range of topics in the Sciences, Humanities, Engineering, Social Sciences, Business, Policy, and Management. This event aims to bring together the knowledge and research of undergraduate and graduate students, faculty, and community members involved in the environment and sustainability.

#### Student Clubs

[Western Wildlife Conservation Society \(WWCS\)](#) is a



student organization dedicated to educating and increasing the involvement of the student body in wildlife conservation. WWCS aims to raise awareness of how to lower ecological footprints and create a

healthy and sustainable planet and pairs up with local organizations such as the London Environmental Network and Salthaven Wildlife and Education Center to help our environment and the wildlife that live in it.

[Environment & Sustainability](#) is run by students from the Centre for Environment and Sustainability.

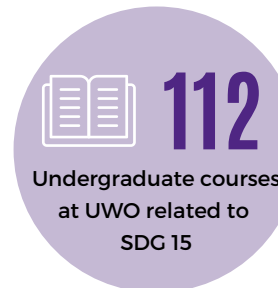
The group has planned various activities such as documentary film nights, sustainability speaker series, Eco-Challenge, guided hiking tours, and volunteer opportunities with local environmental organizations such as Friends of the Cove, Upper Thames River Conservation Authority, and Adopt a Street London.



### Teaching

#### Study Programmes

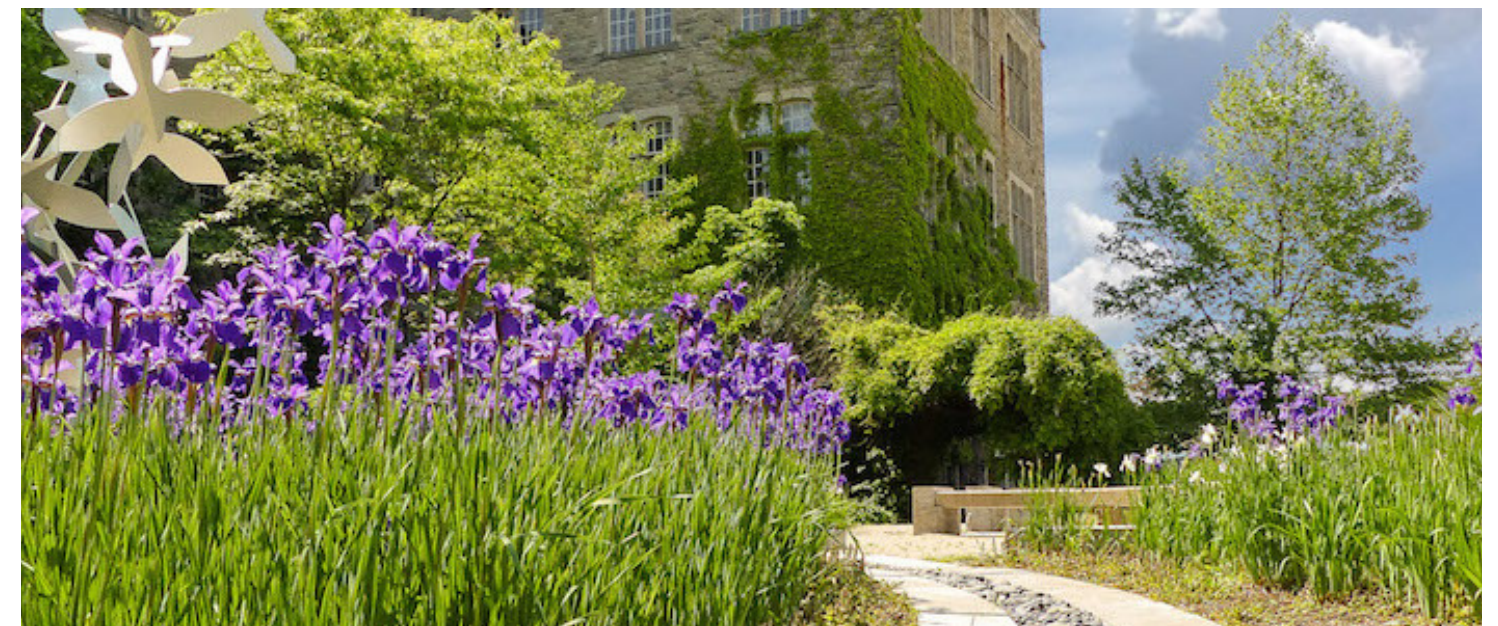
Students in [Honors Specialization in Biodiversity and Conservation](#) will gain an understanding of the forces that are shaping Earth's ecosystem, including the impact of climate change on biological diversity. Capstone courses in biodiversity science and restoration ecology, as well as opportunities to do field research, are highlights of this module. Graduates will be prepared to pursue a diverse array of careers from basic research to public policy in a range of fields that are particularly pertinent in today's rapidly changing world.



#### Student Research Projects

[Undergraduate students in biology](#) will have the opportunity to carry out a research project at a foreign location and get credit for it. Examples of recent offerings include:

- Rainforests and Reef Biology in Costa Rica
- Tropical Marine Biology in Belize
- Forest Ecology in the Adirondacks
- Field Ornithology in Virginia
- Tropical Biodiversity in Ecuador



### Operations

#### Green Spaces

Landscape Services at Western uses a variety of practices to support [ecologically beneficial plantings](#) across campus. Native plants are considered first in planting plans, and the right plant is selected for the right location.

In Western's new rain garden by the Physics and Astronomy Building, low maintenance native plants like coneflower, Joe-Pye weed, and Christmas fern will be planted.

The Rain Infiltration Garden located by the Physics and Astronomy Building is Western's first naturalized rain garden, featuring low-maintenance native plants that help rainwater infiltrate into the ground, rather than flow as stormwater runoff into the sewer system. The garden also helps support biodiversity with native plants, and an improved pedestrian experience of the space with seating to enjoy the garden and nature that visits.

#### Organics Program

Western has an organics program that collects over 300 metric tonnes of food and organics waste across campus. Instead of going to the landfill, the waste is diverted to a waste-to-energy facility that recycles it into renewable energy and organic fertilizer.



## SDG 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

### Research

#### Centre for Transitional Justice and Post-Conflict Reconstruction

The [Centre for Transitional Justice and Post-Conflict Reconstruction](#) is a collaborative, interdisciplinary centre that brings together experts from across the Western community whose teaching and research focus on issues including transitional justice, reconciliation, criminal accountability, legal reconstruction, the environment, human rights, and more. The centre's director Joanna Quinn and her colleagues have assembled their latest book to help the world understand approaches transitional justice, [Transitional Justice in Comparative Perspective: Preconditions for Success](#), which explores the obstacles that have swamped the transitional justice process and kept it from achieving desired outcomes.

#### Surviving Memory in Postwar El Salvador

[Surviving Memory](#), led by project director and Western professor Amanda Grzyb, is committed to documenting the Salvadoran civil war and preventing future violence through commemoration. The team is also developing a mental health strategy that addresses historical memory work, collective trauma and community resilience. The project received a major research grant announced on June 2021 from the Social Sciences and Humanities Research Council (SSHRC). The seven-year, \$2.5-million partnership grant will be used to continue and expand the program.

### Outreach


#### Humanitarian Society

[UWO Humanitarian Society](#) works in partnership with Canadian Red Cross to fundraise and increase awareness for humanitarian crises. They also provide their members with a wide variety of volunteer opportunities within the London community. Past events include fundraising care packages of essential supplies and non-perishable food items that will be donated to local food banks and shelters in London.

#### Western Model United Nations

The [Western Model UN Society](#) was founded to provide a platform for students to practice diplomacy and discuss important international political issues in a setting that simulates the actual United Nations. Members can practice and apply skills such as debating, conducting research, problem-solving, and fostering cooperation. The Western Model UN society provides educational workshops and two in-house conferences: WESMUN for university students across Southwestern Ontario, and WxMUN for high school students. Additionally, the Western Model UN sends large delegations to two Canadian conferences held at Queen's University and the University of McGill.



 **596**  
Undergraduate courses  
at UWO related to  
SDG 16

### Teaching

#### Study Programmes

Western is a leader in transitional justice research and hosts the only program in North America at both the undergraduate and graduate levels that focuses on [transitional justice](#). The Undergraduate Minor in Transitional Justice and Post-Conflict Reconstruction familiarizes students with the emerging debates surrounding transitional justice and post-conflict reconstruction. The Collaborative Graduate Specialization is offered at both the Masters and Doctoral levels.

#### Local Government Program

The [Local Government Program](#) is a leader in municipal-level public administration education and offers two unique opportunities for studying the rapidly changing fields of local government and local government administration. The Masters of Public Administration (MPA) and the Graduate Diploma in Public Administration (GDPA) are designed for mid-career local government administrators who wish to further their public management perspectives and skills.

### Operations

#### Western Humanitarian Award

Funded by the Office of the Vice-President, the [Humanitarian Award](#) recognizes faculty, staff, and students at Western, who are engaged in a range of efforts directed towards improving the quality of life for individuals and communities around the world. Up to \$5,000 may be awarded and must be used in support of humanitarian efforts as chosen by the recipient.

#### Sustainable Procurement

In alignment with Western's [Sustainable Procurement Policy](#), Procurement Services will endeavour to purchase products and services that meet a comprehensive range of sustainability criteria that mirror the University's values, sustainability principles and goals.

#### Crime Prevention On Campus

In addition to cruiser and foot patrol, [Western Special Constables](#) are frequently found patrolling Western and affiliate campuses on bikes. Travelling on bikes allows our Special Constables greater opportunity to engage in conversation and answer inquiries from persons on campus.

There are 25 [Coyle Blue Emergency Phones](#) located strategically on grounds throughout the campus, which provide direct two-way communications to the Western Special Constable Service Communications Operators in the Communications Centre.





## SDG 17: Strengthen the means of implementation and revitalise the global partnership for sustainable development



### Research

#### Ivey's Lawrence National Centre for Policy and Management

Ivey's [Lawrence Centre](#) is an important voice on business-government issues and develops future leaders who better understand the immense value of the collaborative relationship between the public and private sectors and the development of sound policy. The centre's Faculty and Fellows oversee the research, teaching, and outreach activities of the Centre in keeping with its focus on digital innovation, physical infrastructure, and trade.

#### Data-driven Dementia Prevention

Through support from the Weston Family Foundation's Transformational Research 2020 Grant, Dr. Vladimir Hachinski, professor of clinical neurological sciences at Western, is leading interdisciplinary research involving scientists from across Canada, the U.K., and New Zealand. By examining environmental, sociodemographic and patient data from across Canada, Hachinski and his collaborators hope to develop cost-effective [models of dementia prevention](#) that will ultimately help prevent and reduce the occurrence of dementia in the Canadian population.

### Outreach

#### World's Challenge Challenge

[World's Challenge Challenge](#) is an annual international competition hosted by Western in which teams from more than a dozen universities offer up their best solutions to urgent environmental, educational, and social issues. The mission of the competition is to bring together students from a wide range of institutions, cultures, and continents to form a strong international network and create even greater potential solutions to significant global issues. The best of ideas from Western competitors advance to the global competition held at Western.

#### Network for Economics and Social Trends (NEST)

[NEST](#) is a flagship research and policy alliance in the Faculty of Social Science at Western University that informs social and economic policy and practices in Canada and North America. NEST is conducting world-class multidisciplinary research, fostering national and international collaborations, and training the next generation of leaders in academia, the private and non-profit sectors, and government. Announced by NEST in 2020 and currently under construction, the [Canadian Communities Policy Observatory](#) will be a new web-based platform that will make it easier for policymakers, non-profit organizations, academics, journalists, and businesses to access data on Canadian urban centres, neighbourhoods, and regions.

#### Western Sustainability Leaders Program

The Western Sustainability Leaders Program (WSLP) is a way for students to engage with sustainability with a network of like-minded students from across campus. The WSLP engages guest speakers from across campus and the broader community, providing opportunities for students to network with professionals and peers involved with a wide range of sustainability initiatives on campus and in the community.

Ranked 3rd out of 1,406 institutions worldwide in the Times Higher Education (THE) Impact Rankings

### Teaching

#### Community Engaged Learning (CEL)


[Community Engaged Learning](#) allows students the opportunity to take their skills beyond the walls of the classroom and into the community. CEL experiences partner students with groups, individuals, and organizations in the London region and abroad to tackle important problems and issues. One of the programs available is Alternative Spring Break (ASB) where students apply theoretical knowledge in real-world environments taking place in locations like Peru and Costa Rica. Each experience is built around addressing at least one of the Global Sustainable Development Goals.

#### International Learning

[International Learning](#) at Western collaborates with international partners to develop, promote, and support a broad range of activities that cultivate global-ready graduates, and a community of internationally engaged faculty and staff. Exchange programs at Western give the opportunity to study at more than 100 different institutions in over 35 countries around the world.

#### Pro Bono Students Canada

[Pro Bono Students Canada \(PBSC\)](#) Western Chapter is a national program launched by the Faculty of Law. The mission of the program is to pair law students with community agencies in need of free legal services. Agencies typically involved with PBSC include public interest and non-profit organizations, tribunals, legal clinics, and lawyers working pro bono on a particular case. More than 300 organizations have been involved in PBSC's Western Chapter, and in 2020/2021, the Western Chapter is worked on 23 projects with over 51 volunteers.

 **537**  
Undergraduate courses at UWO related to SDG 17

<b>315+</b>	<b>4,800</b>	<b>75,000+</b>
organizations partnered with CEL in 2018/2019	students participated in CEL	hours of student community engagement

### Operations

Western is committed to addressing sustainability challenges, both on campus and on a broader scale. We recognize that as a university we have an important role to play in building a sustainable future. Therefore, [Western has made several regional, national and international sustainability commitments](#).

In 2018, Western became one of the signatories to the [United Nations-linked group](#) to support sustainable development through education and research. The agreement affirms Western's shared commitment to global engagement in solving the world's most pressing problems and working towards sustainable development goals.

As part of Western's new strategic plan, [Towards Western at 150](#), Western will engage with UN Sustainable Development Goals to help guide our work, and create a new sustainability research fund that prioritizes our local and regional partnerships and that creates new experiential learning opportunities for students.

