

# CONCORDIA UNIVERSITY SDGS

14

PRELIMINARY REPORT 2020



## MESSAGE FROM THE PROVOST

Earlier this fall, Concordia made a commitment to join the Decade of Action around the United Nations' Sustainable Development Goals (SDGs). The 17 UN SDGs provide the world with a game plan for pursuing widely shared prosperity while protecting the planet. Concordia is signing up for the effort to realize the goals and to collectively respond to the immense global challenges we face around climate change, inequality, resource depletion and, of course, public health.

As you'll read in this report, our community is already doing a great deal to advance the SDGs. The *Times Higher Education* University Impact Ranking validates this fact, placing Concordia among the top 20 universities in the world for activities related to two SDG areas, and in the top 25 per cent of participating universities overall. Still, there's much more that we can do.

This report will help us chart our way forward by documenting a broad range of SDG-related teaching, research, engagement, innovation and operational activities a diverse array of students, faculty and staff are undertaking. We will broaden and deepen our understanding of SDG activity at Concordia through a Voluntary University Review (VUR) process, borrowing from self-assessment models used by countries and cities. The VUR process will begin in early 2021 and will culminate in a second edition of this report next fall.

As Concordia President Graham Carr stated in the announcement of the university's SDG commitment, the Global Goals help us to orient our long-term vision as a nextgeneration university, and spur us to collective action to secure a sustainable future. We welcome the challenge of trying to live up to the ideals they set for us.

### ANNE WHITELAW

Interim Provost and Vice-President, Academic December 2020

## INTRODUCTION

This is a first report on Concordia's activities related to the Sustainable Development Goals (SDGs).

Produced by the Office of the Provost, the report documents the efforts of students and student groups, faculty and research centres, professional staff and other members of the Concordia community that are connected to and aligned with the SDGs.

Descriptions of the documented activities were either copied or summarized from websites or other publicly available information sources.

Concordia's Office of the Vice-President, Research and Graduate Studies, provided the bibliometric information included in this report. Publication counts are derived from keyword-based Scopus queries compiled by Elsevier for the *Times Higher Education* University Impact Ranking. These SDG-specific queries were applied to Concordia publications from 2015 to 2019.

Other data and statistics were provided by the Office of Institutional Planning and Analysis, the Vice-President, Services and Sustainability, the Office of Sustainability, the Office of the Vice-Provost, Innovation in Teaching and Learning, and others. University communications advisors also contributed information to this report.

## **REPORT DESIGN**

Each of the 17 SDGs has its own section in the report, with relevant activities grouped under its most relevant SDG. Each activity is tagged with one or more of the following icons to signal its primary emphasis:



Feedback, suggestions, correction requests and questions should be sent to Jason Ens, executive director of strategic initiatives, at jason.ens@concordia.ca.



# SDG 1: NO POVERTY

# END POVERTY IN ALL ITS FORMS EVERYWHERE

## CONCORDIA LONGITUDINAL RISK PROJECT 🗾

Led by professors Dale Stack and Lisa Serbin, the <u>Concordia</u> <u>Longitudinal Risk Project</u> is a 30-year longitudinal study on inner-city children from disadvantaged neighbourhoods. Based at the Infant and Child Studies Laboratory, this study measures aggression and social withdrawal in high-risk children. Among other findings, the <u>researchers have learned</u> that being raised in impoverished urban neighbourhoods more than doubles the average person's chances of developing a psychosis-spectrum disorder by middle adulthood. This research is ongoing.

## VOLUNTEER OPPORTUNITIES FOR STUDENTS TO HELP FIGHT POVERTY 줄 🕮

### The LIVE (Leadership, Initiative, Volunteer Engagement)

<u>Centre</u> is Concordia's on-campus volunteer resource centre. The LIVE Centre connects students with opportunities at a range of anti-poverty initiatives in Montreal.

Through group volunteering events and <u>Community Compass</u> programming, about 125 students participated in group volunteering events from January 2019 to October 2020. They helped such organizations as the Welcome Hall Mission, Santropol Roulant, Share the Warmth and Resilience Montreal, as well as the "Brown Bag Lunch" outreach in collaboration with Concordia's Multi-Faith and Spirituality Centre, where students prepare meals to hand out to people living on the streets around the university campuses.



# NEED-BASED STUDENT AID AND WORK-STUDY OPPORTUNITIES

Concordia is ranked among the top universities in Quebec for percentage of overall budget dedicated to student support. Concordia administers its own awards, some of which are donor-funded, and directs students to external opportunities as well. Financial need weighs heavily in the allocation of available scholarships, bursaries and student awards.

The work-study program further assists students by funding part-time jobs on campus for students in financial need. Eligible students may work up to 20 hours per week to a maximum of 200 hours per term in administrative, research or technical positions. Jobs are subsidized by the Quebec Ministère de l'Éducation et Enseignement supérieure and Concordia.

## ASSISTANCE FOR STUDENT PARENTS 🟦

Being a student and a parent can put significant stress on personal finances. To assist student-parents, Concordia has developed the financial matters for <u>student parents website</u> which provides a list of available benefits, allowances and programs for student parents to help them maintain financial stability while pursuing studies.

## REDUCING TEXTBOOK COSTS THROUGH OPEN EDUCATIONAL RESOURCES 🚘

The university offers a Concordia-specific <u>resource guide for</u> <u>open educational resources</u> (OER) to all faculty. The OER by Discipline Resource Guide was developed as part of the Open Educational Resources project, now entering its second year. It is primarily a curated list of open textbooks organized by Concordia's faculties and departments. It also includes other open resources, such as videos. Given the COVID-19 pandemic, access to open textbooks is more important than ever for students who may not have the financial means to buy expensive print textbooks.

# FUNDRAISING TO COMBAT POVERTY IN GREATER MONTREAL 88

Concordia holds an annual fundraising campaign in support of Centraide of Greater Montreal. In 2020, the university community contributed more than \$204,000 to the <u>Concordia</u> <u>Centraide Campaign</u>. Centraide helps over 500,000 Montrealers by distributing funds to more than 350 agencies around the city. Given the current challenges caused by the COVID-19 pandemic, the success of the 2020 campaign couldn't have come at a better time.

The university community contributed \$204,000+ to the 2020 Concordia Centraide Campaign





# SDG 2 ZERO HUNGER

## END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE

## STRATEGIC PLAN FOR SUSTAINABLE FOOD SYSTEMS AT CONCORDIA 🙍

As part of the Sustainability Action Plan, the <u>Sustainable Food</u> <u>Systems Plan</u> specifies the following 20-year vision:

- Become recognized as a leader in sustainable food sourcing
- Enhance the capacity to grow and transform food on campus and maximize learning opportunities
- Provide healthy and affordable food options in every main university building where there are teaching activities

The plan includes targets and strategies for the next five years, including efforts around food waste and food security that aim to increase access to emergency food resources for the community and to develop a Concordia-wide system for food leftovers donation. The plan also aims to increase the sale of campus and community-grown food through farmers markets.

## CONCORDIA FOOD COALITION 🗾 🕿 🕮

The <u>Concordia Food Coalition</u> (CFC) is concerned about the economic, ecological and social implications of the food system at Concordia. The CFC brings together students, faculty and staff to promote and facilitate a transition to a more sustainable food system at the university. The CFC supports working groups focused on using unused space on Concordia's campuses for vegetable gardens, building affordable hydroponic systems, and making urban habitats friendlier to pollinators.

## STUDENT-LED FOOD INITIATIVES 🕮 🏦

<u>Student food groups</u> on campus are active advocates and practitioners of sustainable food choices. Together, their efforts result in increased access to fresh, healthy, local and seasonal food as well as promotion and education around agricultural practices that are ecologically sound, economically viable and socially responsible.

The following initiatives contribute to sustainable food systems at Concordia:

- Campus Potager
- People's Potato
- City Farm School
- Le Frigo Vert
- The Concordia Farmers' Market
- The Hive Café Solidarity Cooperative

## AFFORDABLE FOOD ON CAMPUS 🏛

There are several <u>affordable food initiatives</u> for students at Concordia, providing free food vouchers and free or discounted meals. Concordia's Food Services provides emergency meal vouchers, in collaboration with various students services offices. The <u>Hive Loyola Free Lunch</u>, organized by the Concordia Students Union in conjunction with The Hive Café Co-op, is a free-food option for all Concordia students aimed at fostering community and creating a safe space for people to learn cooking skills. During the COVID-19 crisis, the <u>Concordia</u> <u>Farmers' Market</u> has been preparing free emergency food baskets for those in need among Concordia students and the wider community. And the <u>People's Potato</u> provides over 500 healthy vegan meals for free or voluntary donation, and it also prepares free food parcels twice monthly for pickup for food insecure community members.

6



## THE FOOD STUDIES RESEARCH GROUP 🕿

<u>Concordia Food Studies</u> is a research group dedicated to the research and exchange of ideas on food-related subjects. Food studies brings together faculty and students from a range of disciplines, helping to build understanding of the role of food in culture and identity, the impact of spaces like kitchens and restaurants on eating habits, and the operation of food production systems. More than a dozen faculty members and graduate students offer food study courses at Concordia.

# STUDENT EMERGENCY AND FOOD FUND

To address food emergencies caused by COVID-19, Concordia has set up a \$700,000 <u>COVID-19 Emergency Student Relief</u> <u>Fund</u> to support students in need. To date, the fund has provided financial assistance to close to 400 students.

## SUSTAINABLE FOOD SERVICES 🟦

Concordia Food Services aims to support sustainable eating by

- Sourcing ingredients from local, fair trade and environmentally responsible producers
- Serving healthy and diverse foods, including plenty of plantbased options
- Operating zero-waste and tray-less residential dining halls
- Focusing on reducing food waste through better ordering and menu planning
- Following sustainable cleaning practices

## CONCORDIA GREENHOUSE 줄 🕮

The <u>Concordia Greenhouse</u> is a collectively run, consensusbased, non-profit organization. It uses the Henry H. Hall Building rooftop greenhouse as an all-organic space geared towards community, education and sustainable horticulture. The organization aspires to strengthen the urban agriculture movement at Concordia and in Montreal by growing local produce using ecological practices, providing experiential learning opportunities through volunteering, internships and jobs, and networking with other like-minded individuals and organizations. The greenhouse operates year-round, hosting workshops, projects and events that raise awareness around food issues and alternatives to mainstream consumerism.

## CITY FARM SCHOOL 😎 🕮

The <u>City Farm School</u> is a Concordia Greenhouse initiative to develop partnerships and expertise in urban agriculture on the Island of Montreal. Its aim is to promote a cultural shift towards more resilient communities able to meet the challenges posed by climate change by focusing on local food autonomy.

## MIND.HEART.MOUTH. 🕿 🕮

Mind.Heart.Mouth. is a community garden that runs workshops on sustainable practices such as growing your own food, with financial support from the <u>Sustainability</u> <u>Action Fund</u>. Using garden-based pedagogy and drawing on consumer-experience theories, Mind.Heart.Mouth. is designed to increase awareness and greater connections with the natural environment.

4 student-run initiatives grow produce:

Concordia Greenhouse, Campus Potager, City Farm, Mind.Hearth.Mouth



3 GOOD HEALTH AND WELL-BEING

# SDG 3 GOOD HEALTH AND WELL-BEING

## ENSURE HEALTHY LIVES AND PROMOTE WELL-BEING FOR ALL AT ALL AGES

## CONCORDIA HEALTH INITIATIVE 📝

The <u>Health Initiative</u> at Concordia supports faculty members as they work at the intersections of disciplines to collectively focus on a range of health-related approaches across the lifespan, with the involvement of community members and groups, policy-makers and other stakeholders. The Health Initiative involves a full gamut of researchers from from engineering, social sciences, arts and humanities.

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Under the direction of Professor Kim Sawchuk, <u>ACT (aging</u> + communication + technology) is a research project that addresses the transformation of the experiences of aging with the proliferation of new forms of mediated communications in networked societies. ACT aims to create intergenerational connections, rethink new media from the perspective of old age and confront "digital ageism."

## RESEARCH AND COMMUNITY ENGAGEMENT ON AGING 📝 🕮

Under the direction of Professor Shannon Hebblethwaite, the <u>engAge Centre for Research on Aging</u> aspires to change how we think about aging. Through innovative, collaborative and interdisciplinary exploration, engAge researchers work with older people and their communities to address challenges and facilitate opportunities in all realms of life: social, physical, cognitive, emotional and political. **B/OLD:** Aging in our city, held in 2019, examined the experiences of aging in Montreal from a multidisciplinary, multisectoral and intergenerational perspective. It opened the university's doors widely to community activists, students, policymakers, the media and, most importantly, older adults themselves, inviting all participants to "be bold" and to embrace "old."

In 2020, engAGE launched its <u>Creative Living Lab</u> at the Cavendish Mall in the Montreal-area municipality of Côte-Saint-Luc. Its aim is to combat social isolation among older adults and build inclusive communities across generations and cultures.

## PERFORM CENTRE FOR PREVENTIVE HEALTH 🗾 🕮

Led by scientific director Habib Benali, the <u>PERFORM Centre</u> provides an integrated and comprehensive environment to promote healthier lives through changes in behaviour and lifestyle. Through research, education and prevention programs, PERFORM advances our understanding how best to manage injury and chronic disease, and to improve quality of life. The centre's community engagement team has developed specialized programs designed specifically around cohort groups in support of ongoing research activities.

## ARTS IN HEALTH RESEARCH COLLECTIVE 🗾

The <u>Arts in Health Research Collective</u> (AHRC) is a group of creative arts therapies researchers working together to enhance understanding of the role of the arts in health and wellness. They work in close collaboration with visionary community and university partners. AHRC members use a full array of arts media — music, drama, visual arts, and dance/ movement therapy — to address health and wellness, moving beyond the physical and preventative to encompass a broad focus on helping individuals and communities reach their full potential for living well.

## LEARNING OPPORTUNITIES RELATED TO HEALTH AND WELL-BEING 🔄

Concordia faculty offer students a connected and transformative educational experience in health-related disciplines, including programs in the following areas:

- Applied Human Sciences
- Creative Arts Therapies
- Health, Kinesiology and Applied Physiology
- Health Research and Healthcare Management Program
- Psychology
- Biological and Biomedical Engineering

Students can also get involved with the numerous labs housed across both Concordia campuses that tackle today's most pressing health challenges.

In addition, the Surgical Innovation Program is a unique yearlong class devoted to developing solutions to unmet needs in the medical sector. Innovations are developed through an entrepreneurship competition, which pushes participants to design and market new medical technologies.

## LIFE SCIENCES ENTREPRENEURSHIP **DEVELOPMENT PROGRAM**

### The Life Sciences Entrepreneurship Development Program

is an immersive and experiential training program created by an unprecedented collaboration between Montréal InVivo, the life sciences and health technology research cluster, the Faculty of Pharmacy at Université de Montréal and Concordia's John Molson Executive Centre.

## COMMUNITY HEALTH AND WELLNESS SUPPORTS 🏦 🕮 🗢

Concordia's Health Services take a holistic approach to providing health and wellness services to the university community. The services bring together mental, physical and social health, informed by innovative research and preventive health principles. Students, faculty and staff can access medical care, mental-health support, healthy lifestyle education and community support services.

Concordia students can connect with wellness support services at Zen Den locations on both of its campuses. At these Zen Dens, students can meet with health and wellness professionals, including counsellors, health promotion specialists and advisors from the Access Centre for Students with Disabilities.

Students can also access a variety of wellness events in partnership with community organizations and Concordia programs, such as Art Hives, Yoga Club, Blue Ribbon Therapy Dogs and Vent Over Tea.

Concordia offers a variety of other mental health services for staff and students. Resources include:

- Empower me
- Concordia Health Services
- Counselling and psychological services
- Employee Assistance Program
- Applied Psychology Centre

## CU AT HOME FOR A HEALTHY VIRTUAL COMMUNITY 🏦 🕮

Developed in response to COVID-19, CU at Home is a health and wellness initiative focused on providing advice and resources specifically related to remote work and study. CU at Home features special programming by Alumni Relations, 4<sup>™</sup> SPACE, the Student Success Centre, the Leonard and Bina Ellen Art Gallery, the John Molson Executive Centre and more.

## SMOKE-FREE CAMPUS 🏦

Concordia provides a smoke-free environment to its community. In 2018, in conjunction with expanding no-smoking zones on campus, the university launched an awareness and educational campaign focused on informing smokers about the changes to **university policy** and advising them about smoking cessation services available on campus. Additional policy updates were made as of January 1, 2020, to regulate vaping and the use of cannabis.

# 12 community programs

and over 50 fitness classes at the PERFORM Centre

# SDG 4 QUALITY EDUCATION

## ENSURE INCLUSIVE AND EQUITABLE QUALITY EDUCATION AND PROMOTE LIFELONG LEARNING OPPORTUNITIES FOR ALL

## CENTRE FOR THE STUDY OF LEARNING AND PERFORMANCE 🗾 🕿 🕰 🧬

Under the directorship of Professor Vivek Venkatesh, the <u>Centre for the Study of Learning and Performance</u> (CSLP) is a multi-institutional provincial research centre of excellence. The basic research question CSLP members are addressing is: How can we enhance the learning and performance of complex cognitive skills in learners of all ages? CSLP researchers have developed an <u>array of tools and resources</u> available to the educational community at no charge. These tools include:

- <u>ePEARL</u>, an electronic portfolio for adult learners that develops self-regulated learning skills, which provides an excellent tool for educators using project- and inquiry-based strategies
- The Learning Toolkit+, a suite of tools that support the development of literacy, inquiry and cross-curricular competencies by providing just-in-time multimedia and scaffolded feedback.

- <u>Project SOMEONE</u>, which provides multimedia materials, training curricula and programs to combat online hate and build resilience against radicalization that leads to violent extremism
- <u>Spaceteam ESL</u> (English-as-a-second-language), a multiplayer English-language learning game in which teams of players work together and communicate in order to survive

In 2017, the Centre for the Study of Learning and Performance earned the <u>UNESCO King Sejong Literary Prize</u> for creating and implementing the Learning Toolkit+ in Kenya.

## EDUCATION MAKERS 🗾 🕿 🕮 🧬

Led by Professor Ann-Louise Davidson, <u>Education Makers</u> is an initiative that develops learning communities around maker culture with schools, community organizations, colleges and universities. Maker culture embodies do-it-yourself tinkering using tiny, affordable, open-source computers, electronics and recycled items to engage learners in self-directed experiential learning. The aim is to encourage risk-tolerant, persistent problem-solving in interdependent communities tackling complex, socially relevant problems.

# LEARNING OPPORTUNITIES RELATED TO QUALITY EDUCATION

Concordia offers a range of programs to train professional educators:

- Bachelor's programs in Early Childhood and Elementary Education, Art Education, Child Studies and Teaching English as a Second Language
- Master's degrees in Educational Studies, Educational Technology and Art Education
- Graduate Diplomas in Adult Education, Instructional Technology and Play Therapy
- Graduate Certificate in Didactique et linguistique pour l'enseignement du français langue seconde (Teaching French as a Second Language)

In addition, Concordia offers a <u>Graduate Certificate in</u> <u>University Teaching</u>, which graduate students can take to prepare them to develop and deliver a university course in their area of specialization.

## INNOVATION IN POSTSECONDARY TEACHING AND LEARNING 📝 🚭 😂 🧬

The <u>Lab for Innovation in Teaching and Learning</u> is a dedicated space for prototyping next-generation learning experiences. In its focus on pedagogical testing and experimentation, the innovation lab develops ways to respond to disruptive changes in economies and job markets, learner needs and expectations, and pedagogical practices and technologies.

In addition, Concordia actively participates in <u>SALTISE</u> (Supporting Active Learning and Technological Innovation in Studies of Education) and S4 (Systems, Supporting, Student Success), which are learning-community services that bring together instructors and professional development staff from English and French educational institutions within the Greater Montreal area as well as other regions of Quebec. SALTISE and S4 aim to encourage implementation of evidence-based pedagogy involving instructional innovations and leveraging educational technology to promote improved learning.

# ACCESSIBLE, RELEVANT FORMS OF CONTINUING EDUCATION

<u>Concordia Continuing Education</u> (CCE) features a variety of professionally oriented programs, courses and workshops taught by industry professionals. CCE is also involved with several community-based projects, including the Let's Start Up Program, in partnership with the Lisa Watier Foundation, which provides women the tools and entrepreneurship skills required to start their own businesses; and a certificate program that offers accreditation for Indigenous youth workers, in partnership with the Cree Board of Health and Social Services of James Bay and Boscoville, a non-profit organization that implements prevention and intervention strategies for Quebec youth.

# WORKSHOPS ON SOCIAL SCIENCE RESEARCH 🔤

Led by Professor Mebs Kanji, <u>Workshops on Social Science</u> <u>Research</u> provide short, intensive learning experiences and networking opportunities that allow participants to develop critical thinking skills, make new contacts and succeed as future decision-makers. Workshops are open to everyone, from students to members of the public.

## UNIVERSITY OF THE STREETS CAFÉ 🔤 🕮

The <u>University of the Streets Café</u> program, run by Concordia's <u>Office of Community Engagement</u>, organizes bilingual, public conversations in cafés and community spaces across Montreal. These participatory events seek to reinvent the idea of the "university" by creating spaces for lifelong learning, critical thinking and community engagement in local neighbourhoods.

## YOUTH EDUCATIONAL OFFERINGS 🕿 🕮

Let's Talk Science connects with youth through classroom or community group visits. Let's Talk Science volunteers incorporate hands-on/minds-on science, technology, engineering and math (STEM) learning activities into classroom or community programs or events.

<u>Youth Fusion</u>, which was founded with Concordia support by a university graduate, aims to lower school dropout rates by involving at-risk youth in innovative and meaningful educational projects that contribute to their learning, qualifications and social integration.

The university's a broad range of <u>summer camp offerings</u> help bolster young people's understanding of science, technology and engineering, develop their creativity through the arts or improve athletic and teamwork abilities.

<u>STEAMPunks</u> is aimed at students from grades nine to 11, with an emphasis on linking arts to STEM subjects. STEAM stands for Science, Technology, Engineering, Art and Math. Creativity and social entrepreneurship are key underpinnings of the camp.



# PUBLIC ENGAGEMENT VIA 4TH SPACE

<u>4<sup>TH</sup></u><u>SPACE</u> is a dynamic public venue for learning and discovery. The innovative space, launched in 2018, activates research to facilitate learning. 4<sup>TH</sup> SPACE programming includes experiential learning activities like interactive installations, researchcreation experiences, workshops, hack-a-thons and public talks. 4<sup>TH</sup> SPACE also facilitates learning by hosting residencies, performances and film screenings.

## HIGH-QUALITY ONLINE LEARNING 줄 🔗

KnowledgeOne is an educational services company that specializes in training programs development, production, hosting and operational support. KnowledgeOne built the eConcordia platform for Concordia, now enrolling over 32,000 students per year. In addition, KnowledgeOne has provided online learning services to over 350,000 clients and has developed more than 165 courses, websites and portals for institutions and professional organizations.

# 10,000+ international students

enrolled at Concordia

12

# SDG 5 GENDER EQUALITY

## ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS

## SIMONE DE BEAUVOIR INSTITUTE 🗾 🕿 🕮

Established in 1978 as a site for action and the production of knowledge about women's lives, the <u>Simone de Beauvoir</u> <u>Institute</u> offers the oldest Women's Studies program in Canada and is recognized as one of the most innovative places in Quebec and Canada to study feminisms and develop initiatives that promote equality and social justice for all.

The institute currently offers various undergraduate and graduate programs in Women's Studies for students who are passionate about feminism and who would like to devote themselves to studying its history, theory and political action. There is also a BA major and minor offered in Interdisciplinary Studies in Sexuality.

## CRITICAL FEMINIST ACTIVISM AND RESEARCH 📝 🕮

Under the leadership of Professor Kimberley Manning, the <u>C-FAR</u> (Critical Feminist Activism and Research) project out of Concordia's Simone de Beauvoir Institute is a communitybuilding, research and training initiative emerging from an intersectional feminist framework anchored in anti-racist and anti-oppressive approaches to equity, inclusion and representation on campus and across communities. C-FAR has sponsored a range of projects focused on creating a feminist university.

## CENTRE FOR GENDER ADVOCACY 🕮

The <u>Centre for Gender Advocacy</u> is an independent, student-funded organization promoting gender equality and empowerment, particularly as these relate to marginalized communities. Staff and volunteers fulfill this mandate by offering support services and resources and by raising awareness through campaigns and advocacy.



## GENDER EQUALITY IN STUDENT ADMISSIONS 🚘

Concordia collects data on women's application, acceptance and completion rates, makes these data available in departmental reports and inform Concordia's Board of Governors on enrolments by gender. The <u>Gina Cody School of Engineering</u> <u>and Computer Science</u> has targeted initiatives to address imbalances in women's participation in STEM disciplines..

## TRY CONCORDIA INITIATIVE 🔄 🕮

Created by Professor Tanja Tajmel, <u>Try Concordia</u> is a free mentorship program for women interested in STEM studies after CEGEP. This 14-week program is designed for young women interested in STEM; seeking insight into university life; looking for tips from experienced students; or keen to check out study options before deciding on a university. Through Try Concordia, university students introduce their CEGEP protégés to STEM studies at Concordia.

## CONCORDIA ALUMNI WOMEN AND LEADERSHIP PROGRAM 🔒

The <u>Concordia Alumni Women and Leadership program</u> provides opportunities for Concordia women to connect and share relevant leadership insights and experience. The program brings together the next generation of alumnae with ambassadors, role models, mentors and sponsors who have come before them. The program plays an important role in engaging university leadership in supporting and advancing women in the greater Concordia community. <u>Speed Mentoring</u> receptions offer students a chance to connect with recent graduates and current students, build their network and learn from accomplished professionals working in a variety of industries.



## WOMEN IN ENGINEERING 🕮

Women in Engineering (WIE) is a Concordia student association that aims to provide female engineering and computer science students with support and encouragement along their educational path. WIE events, in particular the outreach programs, encourage young women to explore engineering as a career option while engaging in mentorship and professional development with WIE members. WIE's vision is to promote a culture of inclusiveness and provide a nurturing atmosphere that will foster the growth of members' professional, academic, leadership and social skills.

### Women in Engineering - Career Launch Experience is a

four-month internship program designed for female students in the Gina Cody School of Engineering and Computer Science, promoting their transition to a successful and sustainable career in industry. Students gain practical, professional work experience while being mentored by leaders in industry dedicated to promoting diversity and women's engineering careers as a critical part of ensuring the sustainability of the profession.

# PREVENTING AND RESPONDING TO SEXUAL MISCONDUCT

### The Standing Committee on Sexual Misconduct and

Sexual Violence is a permanent university committee of students, faculty and staff convened to revise and implement Concordia's Policy on Sexual Violence and coordinate efforts to prevent and respond to university sexual violence and sexual misconduct. Specifically, this group addresses, implements and monitors both the university's obligations under Quebec's Bill 151 as well as its progress on various recommendations and priorities. stemming from campus consultations.

The <u>Sexual Assault Resource Centre</u> (SARC) offers confidential and non-judgmental support services to Concordia students, staff and faculty who have been affected by sexual violence. Through education and raising awareness, SARC is committed to preventing sexual violence on campus and beyond.

## PROMOTING WOMEN'S LEADERSHIP IN BUSINESS 🚘

Concordia's John Molson School of Business was among the 48 organizations — and the first business school — to earn a <u>Parity Certification from Women in Governance</u> (La Gouvernance au Féminin). The not-for-profit organization supports women in their leadership development, career advancement and access to board seats across Canada. The certification recognizes organizations that have committed to gender parity in the workplace, integrating it into the ecosystem of the organization and implementing mechanisms to achieve that commitment and sustain it over time.

## CANADIAN WOMEN ARTISTS HISTORY INITIATIVE 📝

Based in the Department of Art History, the <u>Canadian</u> <u>Women Artists History Initiative</u> (CWAHI) is a collaborative endeavour that fosters and circulates scholarly research into women's contributions to the cultural and material history of Canada. With a focus on the period prior to 1967, CWAHI began as a response to the absence of a national forum for discussion and research on historical women's art in Canada.

# 5,515 women

who are the first in their families to attend university were enrolled in 2018-19



# SDG 6 CLEAN WATER AND SANITATION

## ENSURE AVAILABILITY AND SUSTAINABLE MANAGEMENT OF WATER AND SANITATION FOR ALL

## CONCORDIA INSTITUTE FOR WATER, ENERGY AND SUSTAINABLE SYSTEMS 🗹

Under the direction of Professor Catherine Mulligan, the <u>Concordia Institute for Water, Energy and Sustainable</u> <u>Systems</u> trains students to be at the forefront of sustainable development practices by promoting research into new systems, technologies and solutions for water, energy and resource conservation. The institute works is to expand scientific knowledge and develop innovative strategies and technologies that will strengthen the nation's leadership in creating solutions to help sustain the Earth's natural resources.

## WATER SECURITY AND CLIMATE CHANGE LAB

Led by Professor Ali Nazemi, the <u>Water Security and Climate</u> <u>Change</u> (WSCC) lab focuses on understanding climate-change impacts on those elements of the water cycle that have strategic importance for Quebec and Canada. Current active projects range from understanding changes in snow processes and frozen conditions to diagnosing alteration in characteristics of extreme rainfall and streamflow regime using state-ofthe-art modelling tools and data. The research at the WSCC lab also contributes to better understanding of the potential vulnerabilities in human-water systems, and provides solutions for sustainable management of natural resources through building assessment frameworks that can handle uncertainties in modelling and data support.

## URBAN WATER CONSUMPTION RESEARCH 🖉

Planning 30 years ahead, Concordia researchers are looking into what <u>urban water consumption</u> would be like in 2050 in Montreal's suburbs. The researchers examined 21 different climate models and three possible emissions reduction scenarios. These calculations are especially important to cities that do not have ready access to large supplies of fresh water.

The research team aims to increase awareness about water security among policymakers and politicians so they keep longterm trends in mind when making decisions related to water usage and water infrastructure.

### TAINTED WATER INVESTIGATION 😎 🕮

Under the leadership of director Patti Sontag, the Institute for Investigative Journalism has facilitated a national collaborative investigation into Canadian drinking water standards. Journalism students and reporters pooled their research to delve more deeply into the issue of inaccurate measuring of the amount of the neurotoxin lead in drinking water across Canada. The investigation included more than 120 reporters, editors, students and faculty from nine universities and 10 partner media companies. More have since joined, and the effort is ongoing.

## MONTREAL WATERWAYS PROJECT 🕿

<u>Montreal Waterways</u> is a collaborative experiment in composite ethnography investigating the city's relationship with water as a defining feature of its environment and infrastructure. Housed within the Concordia <u>Ethnography</u> <u>Lab</u>, this project offers inquiry into the heterogeneous relations of our shared waterways. The Montreal Waterways working group recently completed the Ghost River Project, which presented an interactive map of one of Montreal's lost rivers.

## WATER-SAVING ACTIVITIES ON CAMPUS 🟦

Concordia is undertaking a variety of efforts to curtail water overuse, including a storm water management system on Loyola Campus, a university-wide water management program and data collection to monitor water use and find new ways to cut back. Water-saving activities on campus include <u>For Love</u> <u>of Water</u>, a project designed to make the university more sustainable while meeting water-usage goals outlined by the Government of Quebec and the City of Montreal.

# SUPPORTING NEW ENTERPRISES AROUND WATER MANAGEMENT

Montreal-based <u>CANN Forecast</u>, which has been supported Concordia's District 3 Innovation Centre since 2017, was among the 10 winners of \$50,000 grants from the Canada Economic Development for Quebec Regions in 2019. CANN Forecast uses artificial intelligence to help municipalities make more cost-efficient and environmentally sound water-management decisions. Its Al-based software programs identify water pipes at risk of breaking and assess water quality.

## LEARNING OPPORTUNITIES RELATED TO CLEAN WATER AND SANITATION

Students in the <u>Civil Engineering program</u> learn to protect water resources, design buildings, bridges and tunnels, and improve transportation and traffic flow. Civil engineers can create the structures and systems that have a positive impact on everyday community life.

The <u>Master of Engineering in Environmental Engineering</u> <u>program</u> focuses on the design and implementation of sustainable waste-management technologies, including water, wastewater and air treatment processes. Students gain a deeper understanding of environmental problems and regulations from both a national and global perspective.





# SDG 7 AFFORDABLE AND CLEAN ENERGY

## ENSURE ACCESS TO AFFORDABLE, RELIABLE, SUSTAINABLE AND MODERN ENERGY FOR ALL

## CONCORDIA CENTRE FOR ZERO ENERGY BUILDING STUDIES 🗹 🔗

Directed by Professor Andreas Athienitis, the <u>Concordia</u> <u>Centre for Zero Energy Building Studies</u> (CZEBS) works on developing buildings that are smarter, more resilient and much more energy efficient. The net-zero energy concept of the <u>Varennes Library in Montreal</u> was partly conceived under the federally funded and Concordia-housed <u>Solar Buildings</u> <u>Research Network</u>.

## SUSTAINABLE ENERGY AND INFRASTRUCTURE SYSTEMS ENGINEERING LAB 📝 😂 🔗

Concordia's <u>Sustainable Energy and Infrastructure Systems</u> <u>Engineering</u> (SEISE) lab, led by Professor Fuzhan Nasiri, is focused on developing clean, sustainable energy for Northern communities. SEISE has partnered with an independent Quebec-based engineering consulting firm to spearhead projects in some of the country's most remote territories. These projects evaluate the <u>feasibility of deploying biomass</u> <u>and geothermal energy systems</u> in northern Indigenous communities, and they include education and "social acceptance" facets.



# CONCORDIA'S LEED-CERTIFIED BUILDINGS

As part of its broader efforts to reduce energy waste, Concordia has built four <u>LEED-certified buildings</u> on its campuses since 2009. Two key aspects of certification are energy efficiency that exceeds building code standards by wide margins, and use of on-site renewable energy sources.

# ENGINEERING A SUSTAINABLE FUTURE

The Department of Chemical and Materials Engineering offers a next-gen approach to the future of advanced manufacturing, clean energy and sustainability. Faculty research expertise includes safe and high-energy batteries, and the use of polymers and nanomaterials as renewable energy sources.

The Concordia Institute of Aerospace Design and Innovation

(CIADI) promotes and supports aerospace research and education at Concordia. The use of renewable energies and alternatives fuels for airplanes is one of CIADI's areas of expertise.

The **Power Electronics and Energy Research** (PEER) Group studies renewable energy and energy harvesting, mini- and microgrids, and transportation electrification. The PEER Group offers a program in static power converters, electric machines, drives and renewable energy that serves students at the university as well as engineers already established in the industry.

## FOSSIL FUEL DIVESTMENT 🟦

The Concordia University Foundation has been a leader in green investment since 2014, when it began to reduce its exposure to fossil fuels. More recently, the foundation has committed to <u>fully divest from the coal, oil and gas</u> sectors by 2025.

## SUPPORTING CLEAN TECHNOLOGY STARTUPS 🔗

Concordia's <u>District 3 Innovation Hub</u> nurtures and develops multidisciplinary teams that harness emerging technologies to create businesses with global impact. Several startups supported by District 3 focus on sustainable solutions and clean technologies, including Aquantix, Extergy, Food4all, Impactful Health R&D, Novagrow and Botamap.

# Concordia has ranked #1

for 21 years in a row as the most energy efficient of Quebec's six major universities



# SDG 8 DECENT WORK AND ECONOMIC GROWTH

## PROMOTE SUSTAINED, INCLUSIVE AND SUSTAINABLE ECONOMIC GROWTH, FULL AND PRODUCTIVE EMPLOYMENT AND DECENT WORK FOR ALL

# STUDENT WORK PLACEMENTS AND PROFESSIONAL DEVELOPMENT

The Institute for Co-operative Education offers internship opportunities to students in more than 40 academic programs across all faculties at both the undergraduate and graduate levels. Opportunities include the undergraduate co-op program, graduate internships, the <u>Career Edge</u> program and the <u>Accelerated Career Experience</u> program. Several academic programs also organize internships for their students.

Concordia's <u>Graduate and Professional Skills program</u> (GradProSkills) offers professional development workshops and resources designed for graduate students. In partnership with on-campus and external experts, GradProSkills offers about 350 workshops and events each year to help Concordia graduate students develop competencies in eight skill domains. It also provides valuable work and volunteer experience to grad students by employing them to develop and deliver workshops, contribute to social media and assist with administering the program. The Student Success Centre's skill development program, <u>FutureReady</u>, helps undergraduate students develop the skills they need to successfully transition from university into the workplace. The program teaches important professional skills through hands-on workshops. Run in collaboration with many student services and university partners, FutureReady provides undergraduate students and recent alumni the opportunity to build on five core skills: communication and digital capabilities; career development; innovation and entrepreneurship; leadership and collaboration; and growth and balance.

Students from across the university can access career and planning services through the <u>Student Success Centre</u>. From career advising and career counselling to job fairs and other events, plus a job bank and other resources, students and alumni can get advice on their career path to find the job they want. <u>Career Management Services</u> (CMS) serves students in the John Molson School of Business by providing resources, programs and networking opportunities to effectively achieve professional success. CMS cultivates and sustains productive relationships with recruitment partners in the business community. Students and alumni can access the job-posting site, register for career events, browse career planning tools and browse online career material. Employers and recruiters can discover recruitment options, post jobs and showcase their company at career fairs.



The <u>CEO shadowing program</u>, launched in 2019, offers MBA students experiential learning with top Montreal companies. Successful candidates spend 12 to 15 weeks working side by side with business leaders. The program provides students with practical experience in real business settings, while at the same time strengthening Concordia's ties to the local business community.

<u>Art Volt</u> is a new platform containing a wide array of programs aimed at supporting recent Fine Arts graduates. Art Volt focuses on initiatives and tools to better equip Concordia's creative practitioners as they transition from their studies to what comes next. The objective is to reinforce the knowledge and practices gained by students during their degree pursuit, while providing real-world experiences and connections they can build on in their personal and professional lives.

## SUSTAINABLE INVESTING PRACTICUM 🕿

Seven John Molson School of Business students inaugurated the <u>Sustainable Investing Practicum</u> (SIP), which took in its initial cohort in May 2020. The environmentally and socially driven program is the first of its kind in Canada. In partnership with Manulife Investment Management, the three-credit SIP enables undergraduate business students to better understand the principles of environmental, social and governance investing in a capital market environment. Students make fund management recommendations to a supervisory committee based on sustainable investing criteria.

## NATIONAL BANK INITIATIVE IN ENTREPRENEURSHIP AND FAMILY BUSINESS

Housed within the John Molson School of Business and funded by a generous gift from the National Bank, the purpose of the <u>National Bank Initiative in Entrepreneurship and</u> <u>Family Business</u> is to spur knowledge creation in the field of entrepreneurship and family business. The initiative supports targeted research, a speaker series and the work of an entrepreneur-in-residence.

## COMMUNITY ECONOMIC DEVELOPMENT PROGRAM 🔁 🕮

### The Graduate Diploma in Community Economic

**Development** is for students who want to contribute to progressive change and civic engagement, at a time when complex, large-scale challenges are affecting societies around the world. Students explore the evolution of community economic development, community organizing and different theories of economic change. Today this includes the growing interest in social innovation and how it generates uncharted paths for community-based social and economic transformation.

## INDIGENOUS YOUTH ENTREPRENEURSHIP

Concordia is the host partner of <u>StartUP Nations</u>. The initiative of the First Nations Social Economy Regional Table (First Nations of Quebec and Labrador Economic Development Commission), in partnership with the First Nations of Quebec and Labrador Youth Network, supports a new generation of Indigenous social and collective entrepreneurs. More than 50 Indigenous youth from 10 communities across Quebec came to Concordia in May 2019 to develop the skills and networks they need to grow their collective projects and influence the social, cultural and economic development of their communities.

## INNOVATION IN BUSINESS FINANCE 🕮

The Institute for Governance of Private and Public Organizations (IGOPP) is a centre for excellence on governance of public and private organizations. Through research, training programs, policy papers and participation in public debates, IGOPP has become a key reference on all issues of governance in the private and public sectors. The institute was created in 2005 by two academic institutions — HEC Montréal and Concordia's John Molson School of Business — as well as the Stephen Jarislowsky Foundation and the Autorité des marchés financiers.



## PAY EQUITY AT CONCORDIA 🟦

Concordia works with unions to undergo <u>pay equity</u> <u>maintenance</u> every five years in accordance with the Quebec Pay Equity Act. The main objective is to determine if discriminatory treatment exists in the compensation of femaledominated job classes when compared to male-dominated job classes of similar value; and to rectify compensation if such practices exist.

## DIGITAL SKILL DEVELOPMENT AMONG CONCORDIA STAFF 🕣 🟦

Concordia's <u>Digital Capabilities</u> project is working towards developing a more productive workforce at the university. One component of the project involves providing access to Udemy, an on-demand learning platform that offers a vast selection of courses ranging from IT operations, web development, marketing, project management and leadership. In addition, the Digital Capabilities project team organized Office 365 unconferences, which aimed to help all faculty and staff better understand and use the Office 365 suite of applications. More than 650 faculty and staff members took part in the interactive sessions, with many more participating in the learn-on-yourown programming.

### FAIR TRADE CAMPUS 🏛

Concordia has been designated by Fairtrade Canada as a <u>Fair Trade campus</u> since 2016. Fairtrade Canada's mission is to ensure decent working conditions as well as fair terms of trade. Fair trade contributes to the empowerment of rural populations around the world. All coffee sold on campus is Fairtrade-certified, except coffee sold by some franchises with locations on Concordia campuses. Fairtrade teas, sugar, chocolate and bananas are also available for sale at food service locations.

3,000+ co-op students

across Concordia's four faculties



# SDG 9 INDUSTRY INNOVATION AND INFRASTRUCTURE

## BUILD RESILIENT INFRASTRUCTURE, PROMOTE INCLUSIVE AND SUSTAINABLE INDUSTRIALISATION AND FOSTER INNOVATION

# CANADIAN RESILIENT INFRASTRUCTURE

Professor Andreas Athienitis is co-chair of the <u>Resilient</u> <u>Infrastructure Project</u>, which is being conducted under the aegis of the Canadian Academy of Engineering (CAE). The CAE is part the Council of Canadian Academies (CCA), a not-forprofit organization that convenes the best experts in their respective fields to assess the evidence on complex scientific topics of public interest to inform decision-making in Canada. CAE assessments, including those produced by the CAE, provide key decision-makers with high-quality information and evidence to develop informed and innovative public policy.

In March 2019, the CAE assembled thought leaders from the professional community, construction industry, academia and three levels of government to begin to work on a national "Roadmap to Resilient, Ultra-Low Energy Built Environment with Deep Integration of Renewables in 2050." Its aim is to achieve at least an 80 per cent reduction in greenhouse gas emissions in new and existing buildings and associated community infrastructure.

## SUSTAINABILITY EDUCATION FOR BUSINESS LEADERS 🔄

The <u>Sustainability Ecosystem</u> in the John Molson Executive Centre aims to advance the adoption of sustainable business practices. The Sustainability Ecosystem capitalizes on collective intelligence by bringing industry experts, framework providers, task forces and practitioners together to share their content, increase transparency and advance education in the field of sustainable business. Investors, corporations, policy-making organizations, academia and other stakeholders all have an interest in being educated on sustainability in relation to operations, finance, marketing, accounting and more.

## AEROSPACE INDUSTRY INNOVATION 屋 🔗

The <u>Concordia Institute of Aerospace Design and Innovation</u> (CIADI) collaborates with industry partners in the broader aerospace community to advance aerospace innovation. CIADI members hold deep expertise in intelligent manufacturing, advanced materials and structures, aircraft configuration and propulsion, and aircraft connectivity and autonomy.

## SYNTHETIC BIOLOGY INNOVATION 📝 🔗

The goal of <u>synthetic biology</u> is to design and build biological systems that are beneficial to society, and entails the genetic modification of microorganisms in order to make them useful for industrial, medicinal or environmental applications.

Concordia's <u>Centre for Applied Synthetic Biology</u> is Canada's first and only research hub dedicated to the development of foundational technologies in synthetic biology and their application to solve emerging needs in environmental protection, sustainable manufacturing, agriculture, food production and drug development. The centre also serves as a catalyst to promote ethical and responsible innovation through communication, transparency and public engagement. Researchers can become immersed in cross-disciplinary training and internship opportunities with Concordia's District 3 to explore commercially viable opportunities in their field of research.

The <u>Genome Foundry</u> is a pioneering facility that employs cutting-edge robotic instrumentation to enable synthetic biologists to execute work at significantly greater scales and speeds. It eliminates bottlenecks in the research cycle and creates greater capacity for designing experiments and imagining possibilities. Foundry projects target high-value applications in human health, agriculture, chemicals and environmental technologies, and provide a broad range of unique training opportunities for professionals in this field.

## EMERGENCY RESPONSE DRONE 🗾 🔗

Professor Luis Rodriguez is collaborating with the International Civil Aviation Organization (ICAO) to develop autonomous navigation and control for Ambular, an emergency response urban air mobility vehicle. <u>Ambular</u> is an ambulance drone designed to transport people in tight, hazardous urban environments from their homes to the hospital. The emergency response drone could be extremely helpful in the years ahead, both in emergency response navigation as well as in the context of a pandemic.

# CONSTRUCTION INDUSTRY INNOVATION

Led by Professor Osama Moselhi, The <u>Centre for Innovation</u> in <u>Construction and Infrastructure Engineering and</u> <u>Management</u> (CICIEM) is Concordia's flagship for innovation in construction automation and civil infrastructure engineering and management. CICIEM promotes and initiates innovative research and knowledge-based solutions for improving quality, productivity, safety and competitiveness of the Canadian construction industry with a focus on:

- Automation and robotics in construction
- Sensing technologies and Internet of Things (IoT) applications in construction/infrastructure engineering and management
- Big data analytics and data science applications
- Industrialization of construction
- Reliability analysis, condition assessment and rating of infrastructure

## APPLIED SCIENCE HUB 😎 🧬 🏦 💆

The recent expansion of the Richard J. Renaud Science Complex with the LEED Gold-certified <u>Applied Science Hub</u> provides Concordia's scientific community with state-of-the-art research facilities and equipment that helps enhance research, innovation and training. The new space is strategically designed to physically connect researchers between spaces, encouraging interdisciplinary collaboration. It houses laboratories and research spaces supporting research fields such as agriculture, health and sustainable development.



# CREATING NEW OPPORTUNITIES IN THE BIOECONOMY 📝 🗗

District 3 has opened a state-of-the-art **BioHub** accelerator inside the Applied Science Hub. The BioHub offers life sciences innovators much-needed assistance and access to programs, expertise, space and equipment. Life sciences startups at the BioHub range in focus from synthetic biology to agrifood to medtech.

District 3 also runs the <u>Quebec Scientific Entrepreneurship</u> <u>program</u> (QcSE), which is a lab-to-market program to help build world-changing tech companies derived from academic research. QcSE is an online program for scientists and STEM researchers to explore entrepreneurship and help them transform their scientific discoveries to create a positive impact beyond the lab. In less than a year and a half, the program trained over 300 scientists and researchers from across 10 Quebec universities, with 10 new biotech startups created.

## DISTRICT 3 INNOVATION HUB 🕿

Whether looking to explore entrepreneurship, learn about cutting-edge technologies, network with scientists and peers or explore new career opportunities in Canada's startup ecosystem, Concordia's <u>District 3</u> offers students the best-inclass training and community events designed to empower the leaders of tomorrow. <u>Its programs</u> provide opportunities for involvement with:

- Scientific entrepreneurship
- Artificial intelligence
- Social innovation
- Fintech
- XPrize competitions

# SUPPORTING INNOVATION AND DEVELOPMENT IN AFRICA 🕮 🔗 🚘

The <u>Concordia Africa Initiative</u> is in the early stages of developing boot camps for entrepreneurs in collaboration with startup incubators in Kenya, Uganda, Rwanda and Ethiopia in partnership with District 3. Supporting domestic technology development, research and innovation helps find lasting solutions to both economic and environmental challenges, such as increased resource and energy efficiency.

# \$61.9 million

## in sponsored research income for Concordia in 2019-2020



# SDG 10 REDUCED INEQUALITIES

# REDUCE INEQUALITY WITHIN AND AMONG COUNTRIES

## CENTRE FOR THE STUDY OF POLITICS AND IMMIGRATION 🗹

Led by Professor Mireille Paquet, the <u>Centre for the Study</u> of <u>Politics and Immigration</u> (CSPI) focuses on the politics of immigration and immigration-related public policies. The centre produces and supports original research, provides training to students and is engaged in knowledge dissemination.

Housed within the CSPI, the <u>Immigration and Diversity</u> <u>Investigation Lab</u> aims to better understand immigrants' adaptation to their environment and local populations' reactions to their increasingly diverse environment.

# UNIVERSITY EQUITY, DIVERSITY AND INCLUSION INITIATIVES

In July 2018, the new role of Special Advisor to the Provost on Campus Life was created with the aim of improving policies and processes to foster a safe, accessible, diverse, inclusive and respectful campus. Part of this new responsibility included facilitating a campus conversation on equity, diversity and inclusion at Concordia. The <u>Working Group on Equity</u>, <u>Diversity and Inclusion</u> released their recommendations in September 2020.

As part of this effort, the university is <u>launching an Equity</u> <u>Office</u> that will play a lead role in ensuring a fair and safe environment for all members of the Concordia community. The executive director of the Equity Office will provide leadership and guidance for the provost and vice-president, academic, and other members of the senior administration on a wide range of issues critical to decision-making in all equity, diversity, accessibility and inclusion matters.

26

Concordia also has an EDI Action Plan for the Canada

**Research Chairs Program**. It was developed in response to the Government of Canada's Equity, Diversity and Inclusion Action Plan (2017), which stipulated that all institutions participating in the Canada Research Chairs Program develop their own EDI action plans, publish information and data about the management of their chair allocations, and meet institutional equity targets.

# INDIGENOUS DIRECTIONS ACTION PLAN

The Indigenous Directions Action Plan is a guide and tool to move the university towards a more equitable and inclusive future with respect to Indigenous community members. It was created in part to respond to the Truth and Reconciliation Commission of Canada's Calls to Action in 2015. The action plan aims to recalibrate and transform the university's internal and external relationships with Indigenous peoples and communities. With its detailed recommendations and timelines, the action plan lays out a path toward the decolonization and Indigenization of the university, helping to co-construct a shared future based on responsibility, reciprocity and respect.

## AI AND INDIGENOUS INCLUSION 🕮

Professor Jason Edward Lewis co-leads a multinational effort to imagine the future of artificial intelligence (AI) from an Indigenous perspective. In winter and spring 2019, a group of Indigenous scholars met to think through concepts around AI and how they relate to the Indigenous experience. The multidisciplinary group included participants from Canada, the United States, Australia, New Zealand and the United Kingdom. After a series of workshops, the group developed the position paper, Indigenous Protocol and Artificial Intelligence.

## BLACK PERSPECTIVES OFFICE 🗾 🕿 🕿 🏦

In October 2020, Concordia opened its <u>Black Perspectives</u> <u>Office</u>. The office's mission is to advance Black initiatives and scholarship at Concordia. The office sponsors programming, builds and connects networks and champions Black perspectives at the university. The office also offers funding, mentorship, advocacy, assistance and resources for Concordia's Black community and beyond.

## PRESIDENT'S TASK FORCE ON ANTI-BLACK RACISM 屋 🚭 😂 🏛

Also in October 2020, Concordia launched its <u>President's Task</u> <u>Force on Anti-Black Racism</u>. The task force's mandate is to oversee wide-ranging anti-racism efforts across Concordia to help the university better serve as a diverse and welcoming place with deep connections to the community. The task force will direct and coordinate the work needed to generate recommendations that will address systemic anti-Black racism based on the experiences of faculty, staff and students.

# ACCESSIBILITY FOR STUDENTS WITH DISABILITIES 🟦

The <u>Access Centre for Students with Disabilities</u> coordinates a variety of services and accommodations for students such as:

- Exam accommodations
- Sign language interpretation and transcription
- Providing accessible materials in alternate formats, such as braille, large print
- Hygiene and/or mobility attendants
- Textbook/coursepack conversion services

# SOCIAL INNOVATION AROUND DISABILITY

Enable Montreal was a non-competitive design challenge focused on innovative solutions to make Montreal more accessible and inclusive for people living with physical disabilities. Participant teams of engaged community members, students, researchers, activists, engineers and design professionals developed proposals, the most promising of which received continued support from the city's Maison de l'innovation sociale.

On the basis of learnings from the design challenge, Concordia's Office of Community Engagement created the <u>Inclusive</u> <u>Innovation Guide</u>, an event-planning resource to help Concordians and those in the innovation sector make their activities barrier free.



## LEARNING OPPORTUNITIES RELATED TO REDUCED INEQUALITIES 🔁

The <u>minor in Human Rights Studies</u> draws its curriculum from a variety of disciplines, immersing students in debates over the primacy of the individual within society and the universal versus relativist approach to rights and positive and negative freedoms.

The <u>Certificate in Immigration Studies</u> and the <u>minor in</u> <u>Immigration Studies</u> explore the politics, sociology, geography and anthropology of migration and, through community engagement, delve into the practical expression of those dynamics in Quebec and Canada.

# 2,108 students registered

with the Accessibility Centre for Students with Disabilities in 2019-20



# SDG 11 SUSTAINABLE CITIES AND COMMUNITIES

## MAKE CITIES AND HUMAN SETTLEMENTS SAFE, RESILIENT AND SUSTAINABLE

## CANADA EXCELLENCE RESEARCH CHAIR IN SMART, SUSTAINABLE AND RESILIENT COMMUNITIES AND CITIES 📝 😂 🗗

Led by Professor Ursula Eicker, a German physicist with two decades of innovative research and industry experience, started as the first <u>Canada Excellence Research Chair (CERC)</u> in <u>Smart, Sustainable and Resilient Communities and Cities</u> in 2019. The chair comes with \$10 million in research funding. Professor Eicker will work with other cities researchers and students at Concordia to integrate innovative technologies, nature-based solutions and artistic expressions in nextgeneration cities.

# NEXT-GENERATION CITIES INSTITUTE

The university's newly launched <u>Next-Generation Cities</u> <u>Institute</u> led by Professor Ursula Eicker leverages the combined strength of its cities research capacity to develop the cities of the future. The institute brings together researchers from a range of disciplines including engineering, economics, natural sciences, the arts, humanities and the social sciences to engage in an inclusive and universal approach to sustainable urban development.

## INSTITUTE FOR URBAN FUTURES 🗾 🕿 🕮

Led by Professor Shauna Janssen, the <u>Institute for Urban</u> <u>Futures</u> is a research and research-creation centre embedded within the Faculty of Fine Arts. The institute's overarching goal is to make space for critical and creative inquiry about the contemporary urban condition. The institute's projects aim to imagine possible urban futures that are radically inclusive, just, resilient and sustainable.

## TRANSPORTATION RESEARCH FOR INTEGRATED PLANNING LAB

Led by Professor Zachary Patterson, the <u>Transportation</u> <u>Research for Integrated Planning (TRIP) Lab</u> focuses on the modelling of transportation, the environment and land use and their linkages. It uses new technologies to collect data on where people decide to live and how they move around the city. The TRIP Lab is equipped with high-powered computers and servers for geographical and statistical analysis and transportation modelling

## ART HIVES 🕮

<u>Art Hives</u> are arts-based social spaces where people gather to build real connections and a sense of community. Visitors use their hands and work with a wide variety of materials to connect, create and express through artistic practices. Launched in 2010 by Professor Janis Timm-Bottos, the Art Hives initiative has blossomed into a network of locations on four continents, which share values of arts-based social inclusion and community-generated innovation. Concordia now has <u>two</u> **art hive locations** on its campuses.

## SUSTAINABILITY IN THE CITY AND BEYOND CONFERENCE 📝 🕿 🕮

### This Sustainability in the City and Beyond Conference,

held in 2019, provided students, researchers and the general public with the opportunity to participate in cross-disciplinary discussions and activities addressing sustainability research in relation to pressing urban and global issues, as well as the role that art plays in shaping more socially and environmentally just urban futures. The conference was co-organized by the Loyola College for Diversity and Sustainability, the Loyola Sustainability Research Centre and the Institute for Urban Futures.

# CAPTURING MONTREAL'S ORAL HISTORY

Co-directed by professors Sébastien Caquard and Luis Sotelo Castro, Concordia's <u>Centre for Oral History and Digital</u> <u>Storytelling</u> (COHDS) has been home to several large-scale research programs, including the <u>Montreal Life Stories project</u>, a community-university research alliance. Affiliated members have produced online digital stories and memoryscapes, audio walks, live performances, radio programs, films, art installations, museum exhibitions, pedagogical resources and more. COHDS is home to the <u>Acts of Listening Lab</u>, which brings together artists-researchers, communities and activists from across disciplines and cultures interested in exploring alternative and creative ways of making life stories matter in the public sphere.

# RESEARCH ON DEINDUSTRIALIZING CITIES

Professor Steven High is leading a new collaborative research project focused on the consequences of working-class job loss in the West. The seven-year-long transnational project, Deindustrialization and the Politics of our Time, will be based at Concordia's <u>Centre for Oral History and Digital Storytelling</u>. Twenty-four researchers and dozens of partner organizations will collaborate on the investigation.

## OFFICE OF RULES AND NORMS 🔤

The <u>Office of Rules and Norms</u> is a transdisciplinary research studio within the Faculty of Fine Arts. The office runs events and seminar courses for students. In winter 2020, it offered a new course, [Anti] <u>Speculation-Excess and the City</u>. Art, rules and norms intersected in this experimental seminar where two dozen students engaged as artists with the culture of real estate speculation and the housing crisis. Visiting artist Marie-Sophie Banville led the seminar and helped students unpack the complex system of regulations that produces unaffordable cities and leads to social problems of displacement, precariousness and homelessness.

## INDIGENOUS FUTURES RESEARCH 🕮

Under the leadership of Professor Jason Edward Lewis, the Indigenous Futures Research Centre (IFRC) explores how Indigenous people are imagining the future of their communities. Associated researchers are interested in narratives, theories, frameworks and technologies that help articulate a continuum between Indigenous histories, the present and futures to the seventh generation and beyond. The IFRC supports a mix of research approaches, topics and collaborations ranging across community collaboration, art- and technology-making, scholarly analysis, experimental pedagogy and theoretical development to illuminate how the challenges of the present can be addressed, in part, through concrete, constructive and critical dreams of the future.

30



# INDIGENOUS INCLUSION IN ARTS AND CULTURE 🗲 🕮

Under the direction of Professor Heather Igloliorte, the Inuit Futures in Arts Leadership: The Pilimmaksarniq/ Pijariuqsarniq Project supports Inuit and Inuvialuit to become leaders within their communities in all areas of the arts by providing innovative, hands-on mentoring and training opportunities. Inuit Futures ilinniaqtuit (students/learners) will undertake their own research in the arts, participate in other Inuit-led artistic projects or gain valuable skills and knowledge by participating in paid internships within a network of arts institutions. These experiences improve their readiness for careers in the arts as well as creating a new generation of knowledge creators.

## LEARNING OPPORTUNITIES RELATED TO SUSTAINABLE CITIES AND COMMUNITIES 🚭

The <u>BA in Urban Planning and Urban Studies</u> introduces students to the processes of planned change in urban environments. Students in this program study the relationships between the sociocultural, economic and physical aspects of urban development and put their skills to work by analyzing real-world problems identified in Montreal neighbourhoods and creating solutions.

## CITYSTUDIO MONTREAL 🔄

Concordia was a founding partner of <u>CityStudio Montreal</u>, which brings together municipal officials, community members, faculty and students to design interventions that make the city a better place to live, work and learn. CityStudio Montreal offers students and faculty a unique opportunity to gain insight into the way large cities work on a day-to-day basis and to take an active part in city-related projects.

## QUARTIER CONCORDIA 🕮

Quartier Concordia is a \$400-million project aimed at revitalizing the area around Concordia in downtown Montreal. The university works closely with city administration, local businesses, organizations and schools to breathe new life into the community. Throughout downtown Quartier Concordia, community members can enjoy the university's <u>public art</u> <u>collection</u>, which features the work of over 40 artists.

## PUBLIC ARTS, CULTURE AND HERITAGE 🕮

Concordia is bursting with artistic activity. Five <u>campus galleries</u> feature curated art exhibitions throughout the year. The cutting edge <u>4<sup>TH</sup> SPACE</u> features exhibitions of interactive installations, curated programs, residencies and events including workshops, performances, hack-a-thons, screenings and lectures. Through the Department of Theatre, <u>public arts performances</u> help embody the department's mission to develop actors, directors, designers and playwrights, to support theatre through teaching, research and performances, and to foster the appreciation of the value of theatre and fine arts in society.

Undergraduate students in the Faculty of Fine Arts pool their diverse talents and resources each year to put on North America's largest student-run arts festival, <u>Art Matters</u>. For 20 years, Art Matters has been run by students, for students, to create work and creative opportunities that showcase early-career artists from all disciplines. Works include theatre, new media, dance, sculpture, design, literature, film and music. <u>Cinema Politica Concordia</u>, a media arts nonprofit founded at the university, shows independent political films and videos made by Canadian and international artists.

# 14 university research centres

and over

200 researchers

come together at the Next-Generation Cities Institute

## SDG 12 RESPONSIBLE CONSUMPTION AND PRODUCTION

## ENSURE SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS

## RESEARCH CHAIR IN SUSTAINABLE DESIGN FOR THE BUILT ENVIRONMENT 📝 🕿 🕮

Professor Carmela Cucuzzella holds the <u>Concordia</u> <u>University Research Chair in Integrated Design, Ecology</u> <u>and Sustainability for the Built Environment</u>, which focuses on how designers can go beyond current injunctions of environmental norms and policies in order to achieve a creative balance between design ethics and aesthetics in their public space projects. Chair activities include a design competition focused on bus shelters, comparative analyses of municipal approaches to encouraging multi-modal transportation and public art that provides environmental education.

# RESEARCH ON THE LIFESPAN OF CONSUMER PRODUCTS 🗾 🗲

Originating from a major three-year research-creation team project involving Professor Martin Racine, the <u>DNA</u> project undertook a sustained reflection on the Future Life of Objects. The project imagines a future world where even manufactured objects encode their own genetic information, as with DNA. Embedded with this information, objects reveal the environmental impacts resulting from their fabrication and consumption.

The <u>METAMORPHOSE</u> project, also led by Professor Racine, aimed to design new products while anticipating their eventual transformation, either by personalizing or updating their function or style with rapid prototyping in order to give them new life. The aim is to extend products' lives by offering an alternative to the planned aesthetic and technical obsolescence that prevails today.

## CHAMPLAIN BRIDGE PROJECT 📝 🕿 🕮

Under the leadership of Professor Alice Jarry, the <u>Champlain</u> <u>Bridge Project</u> focuses on the potential socio-environmental benefits of the deconstruction of the Champlain Bridge and the positive impacts of repurposing its materials into new municipal infrastructure, urban interventions and public art works. The project also seeks to underline the non-financial benefits that emerge from participatory processes and the direct benefits of such processes to communities and local stakeholders.

## WASTE REDUCTION INITIATIVES 🟦 🕮

Facilities Management's Zero Waste Concordia program is committed to becoming a model for sustainable waste, water and energy management at universities. Zero Waste Concordia's mission is to divert landfill waste and instead reduce, reuse, recycle and rot. The program targets coffee cups, e-waste, paper, office furnishings and organic waste.

The Zero Waste Week and Challenge is a yearly, free event series and pledge dedicated to rethinking and innovating the way we approach waste. Students learn about upcycling, repurposing, composting and recycling, as well as the environmental and social implications of unsustainable waste management systems through workshops and activities.

The <u>Dish Project</u> is a student-run waste reduction initiative and official partner of Zero Waste Concordia. By lending out its inventory of reusable dishes, the project makes it easy for anyone in Montreal to run a sustainable event. It aims to make events more sustainable by supplying reusable dishes as a free and accessible alternative to disposable products. By providing practical resources to ease participation in the shared economy, the project hopes to encourage people to rethink consumer culture and act in solidarity with those most impacted by it.



The catering agreement contract used by Concordia's <u>Food</u> <u>Services</u> includes sustainable practices. All of our dining halls employ a compost-only model. Compost collection has more than doubled, from around 45 metric tonnes in 2015-2016 through 15 compost bins to over 90 metric tonnes in 2018-2019 through over 200 compost bins.

## CONCORDIA UNIVERSITY'S CENTRE FOR CREATIVE REUSE 🟦

Part of the Zero Waste Concordia initiative, <u>Concordia</u> <u>University's Centre for Creative Reuse</u> (CUCCR), led by former and current students Anna Timm-Bottos and Arrien Weeks, is dedicated to diverting materials from inside the university's waste-stream and offering them to the general community free of cost. Its spaces feature a variety of material storage and displays that feature the diverse materials coming out of offices, departments, studios and labs on campus. A variety of wood, glass, metal, fibres, office supplies, plastics, paper, tools and equipment, and arts and crafts supplies fill the shelves. CUCCR has diverted over 18 tonnes of materials from Concordia's waste stream.

## FOOD COMPOSTING INITIATIVES 🏦 🕮

Under the Sustainability Action Plan, Concordia has established a 20-year vision to divert 90 per cent of material waste from landfill through compost, recycling and material reuse, and reduce the total material waste by 50 per cent, per full-time equivalent student, through programs that encourage low-waste purchasing and material reuse. The plan includes targets and strategies for the next five years, such as strategies to implement new low-waste purchasing policies, to pilot a new waste-sorting centre and begin an e-waste reuse initiative. Waste Not, Want Not is a student-led campaign focused on establishing a complete compost cycle at Concordia. It provides access to a composting facility, installs compost bins across all of Concordia and leads an educational campaign across the community. The Waste Not, Want Not team, led by PhD candidate Kerolas Riad, believes that when people learn how to take the first small step of properly sorting their waste, they will take the bigger steps of reducing their waste on their own.

## LEARNING OPPORTUNITIES RELATED TO RESPONSIBLE CONSUMPTION AND PRODUCTION 🔄

The two-year <u>Master of Design</u> (MDes) program provides an opportunity for students to broaden their theoretical knowledge of design and focus on innovative research in the areas of visual communication, the built environment, interaction design and design studies. The MDes program offers a stimulating and creative environment that encourages students to explore conceptual and theoretical issues through a project-based or academic research. Most importantly, the program distinguishes itself by putting the emphasis on issues that deal with sustainability — ecological, social and economic — as a strategy and philosophy fundamental for the future of design theory and practice.

# 16% overall waste reduction

university to show the benefits of composting to the university per person on Concordia's campuses since 2016



## TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS

## CLIMATE EMERGENCY DECLARATION 🟦

Ten Quebec universities, including Concordia, joined a worldwide movement of higher learning institutions by signing the <u>Climate Emergency Declaration</u> in 2019. Universities signing the declaration are making three structural commitments: become carbon-neutral by 2030, or 2050 at the latest; allocate more resources for research aiming to fight climate change and develop related skills; and increase the availability of environmental and sustainability education in academic programs, on campuses and in communityawareness programs.

## CONCORDIA'S SUSTAINABILITY ACTION PLAN 📝 🕿 🚘 🏛

The <u>Sustainability Action Plan</u> acts as a roadmap Concordia in the areas of food, waste, research and curriculum, and climate action. The <u>Climate Action Plan</u> articulates the following 20-year vision:

- Eliminate CO<sub>2</sub> and other greenhouse gas emissions from all direct sources, including building energy use and transportation
- Complete full electrification of all transportation infrastructure, including vehicle fleets and parking facilities
- Attain carbon neutrality across all remaining sources of emissions

The Climate Action Plan elaborates five-year goals that include incorporating climate planning into Concordia's governance and operations; reducing emissions from buildings through piloting renewable natural gas and shifting to electrical heating systems; expanding the electric transportation infrastructure; ending all investments in the coal, oil and gas sectors; and increasing the university' resilience in the context of a changing climate.

## LOYOLA SUSTAINABILITY RESEARCH CENTRE 🗾 🚘 🕮

The mission of the Loyola Sustainability Research Centre

(LSRC) is to promote a transdisciplinary approach to research and education about relationships among natural, human and technological systems through basic and applied research, research-creation and art and design. The LSRC brings together faculty members, students and postdoctoral associates from across the university to explore the many facets of sustainability and resilience. The LSRC together supports research synthesis and knowledge transfer that are relevant for decision-making, policies and a transition toward a culture of sustainability.

The centre works to promote climate action through ongoing projects and by hosting events such as the Sustainability in the City and Beyond Conference. The LSRC also hosted consultations on Concordia's <u>Sustainability Action Plan</u> throughout its development process.

## MATTHEWS CLIMATE LAB 🗾

The <u>Matthews Climate Lab</u> is led by Professor Damon Matthews. The lab aims to improve our understanding of the science of climate change, its impacts on human and environmental systems and how best to respond to the challenge of climate mitigation. The lab produces climate change projections, projects allowable emissions for climate policies and models the influence of land use on climate changes. The lab also produced the <u>Climate Clock</u>, in collaboration with the Human Impact Lab, providing a dramatic visualization of how long we have to prevent the global average temperature from passing the 1.5°C threshold.

## FLYING LESS PLEDGE

The Flying Less Concordia Pledge is aimed at Concordia faculty and staff who are committed to reducing their flying as a way to contribute to a low-carbon academic working culture. The pledge asks signatories to prioritize travel-free meetings and events by using available technologies; reducing academic air travel to reach the goal of living under an annual carbon budget; supporting academic activities and students' initiatives that do not require flying and, instead, encouraging local research and excursions where possible; and promoting the flying-less culture at Concordia by sharing the need to reduce academic emissions and the solutions available across the university and beyond. The Flying Less Concordia Pledge was developed by the Climate Emergency Committee in the Department of Geography, Planning and Environment.

# CLIMATE-FRIENDLY INVESTMENTS BY 2025

In addition to committing to <u>end investments in the coal, oil</u> <u>and gas sectors</u> within five years, the Concordia University Foundation became the first university foundation in Quebec to set a target of 100 per cent sustainable investments by 2025. This move will include doubling its social or environmental impact investment. Concordia also became the first Canadian university <u>to issue a sustainable bond</u>, which is being used help finance the new LEED-certified Applied Science Hub.

the Concordia University Foundation aims to be divested from coal, oil and gas





# SDG 14 LIFE BELOW WATER

## CONSERVE AND SUSTAINABLY USE THE OCEANS, SEAS AND MARINE RESOURCES FOR SUSTAINABLE DEVELOPMENT

## FISHERIES ECOLOGY RESEARCH 🗾

Led by Professor Eric Pedersen, the research team at the **Quantitative Fisheries Ecology Lab** focuses on understanding the forces — both natural and human — that shape marine and aquatic communities, and how they determine the large-scale and long-term dynamics of fisheries. The lab aims to understand how to better manage fished ecosystems to ensure that they are both able to remain resilient to environmental change and continue to provide resources to the stakeholders and communities that rely on them. The lab also aims to improve how well we can detect rapid changes in these systems and predict what changes may occur in the future.

# RESEARCH ON THE HEALTH OF AQUATIC ENVIRONMENTS 🗾

Several <u>research projects</u> housed within the <u>Concordia</u> <u>Institute for Water, Energy and Sustainable Systems</u> (CIWESS) work to advance the health of aquatic environments.

Under the leadership of its director, Professor Catherine Mulligan, CIWESS researchers study sunlight absorption trends in oceans, improvements to surface water quality from geotextile filtration systems, and the toxicity of engineered nanomaterials in aquatic environments.

## FISH CONSERVATION AND MANAGEMENT RESEARCH 🗾

The <u>Fraser Lab</u> is a team of Concordia biologists who combine evolutionary, genetic and ecological studies towards effective biodiversity conservation and fisheries management. Led by Professor Dylan Fraser, the lab strives to develop more effective conservation and management of natural populations and species, with an emphasis on fishes. One aspect of the lab's research focuses on understanding how to enhance fishery harvesting practices while maintaining biodiversity and ecosystem services.

36





#### MARINE TRANSPORTATION TRAINING 🕿

Concordia offers a <u>Certificate in Marine Transportation</u>, created in partnership with the Shipping Federation of Canada with the goal of supporting an environmentally sustainable marine transportation system that is safe, efficient, competitive and quality-oriented.

#### CLEAN WATER INNOVATIONS 🕿 🔗

Last year, final-year undergraduates in the Gina Cody School of Engineering and Computer Science created an <u>aquatic drone</u> prototype capable of detecting and collecting plastic on the surface of ocean water. The prototype uses image processing technologies and machine learning to gather plastic into an integrated collection bin. The craft is fully autonomous and required minimal maintenance.

Professor Chunjiang An has been awarded over \$5 million from Fisheries and Oceans Canada for projects focused on improving <u>oil-spill cleanup processes</u>. One project will develop ways to decrease environmental risks during oil-spill cleanups by accelerating degradation and removal of the pollutant, while the second will help fill the gap between the available surface washing techniques and the increasing application need.

#### LEARNING OPPORTUNITIES RELATED TO LIFE BELOW WATER 🚘

Students in the <u>BSc in Environmental Science</u> program study some of the most important issues we face today: climate change, natural resource management and sustainability. Students interested in issues such as river dynamics, hydrology, air and water pollution, watershed and coastal management can choose the hydrosphere stream of study.

## COMMUNITY AND QUANTITATIVE ECOLOGY RESEARCH

#### The Laboratory of Community and Quantitative Ecology,

under the leadership of Professor Pedro Peres-Neto, is focused on spatial patterns of biodiversity. The lab's research interests lie at the interface of community and aquatic ecology, incorporating principles from a diverse suite of areas including fish ecology, quantitative ecology, landscape ecology, ecomorphology and evolution.



related to sustainability

## SDG 15 LIFE ON LAND

1800

States of

PROTECT, RESTORE AND PROMOTE SUSTAINABLE USE OF TERRESTRIAL ECOSYSTEMS, SUSTAINABLY MANAGE FORESTS, COMBAT DESERTIFICATION, HALT AND REVERSE LAND DEGRADATION, AND HALT BIODIVERSITY LOSS

## BIODIVERSITY SCIENCE COLLABORATION

Thirteen Concordia researchers and 73 students are involved with the <u>Quebec Centre for Biodiversity Science</u> (QCBS). The centre pools the available state-of-the-art infrastructure and field stations of multiple institutions and facilitates access to its members, including researchers and students. This integration of resources favours the multi-scale and multidisciplinary research required to generate biodiversity knowledge relevant to the region.

The research framework of the QCBS has four main axes:

- Discovering biodiversity
- Linking biodiversity to ecosystems
- Ecosystem goods and services and human well being
- Human dimensions of biodiversity

Several Loyola Sustainability Research Centre (LSRC) faculty members are also members of the QCBS. LSRC hosted the 10th Annual QCBS Symposium on the Sir George Williams Campus in 2019.

#### COMMUNITY ECOLOGY AND BIOGEOGRAPHY RESEARCH

The <u>Community Ecology and Biogeography Lab</u>, led by Professor Jean-Philippe Lessard, investigates the forces enabling the maintenance, and governing the distribution, of biological diversity. Its researchers seek to understand how climate, dispersal limitations and biotic interactions affect the distribution of species and structure of communities. They are interested in the interactive role of these processes contemporarily and historically.

#### RIVER MANAGEMENT RESEARCH 📝

The <u>River Management Lab</u>, led by Pascale Biron, focuses on the science of natural river dynamics, including the minimum space around rivers required for fluvial processes to operate. Specific research projects address stream restoration for fish habitat, sustainable management of agricultural streams, climate change impacts on rivers, three-dimensional fluid dynamics and flood management and mapping.

#### CONSERVATION BIOLOGY RESEARCH 📝

In addition to its focus on fisheries, the <u>Fraser Lab</u> focuses on how population diversity within species arises, evolves and persists in the face of natural and human-induced environmental changes, and its consequences for species conservation and restoration programs, fisheries management, global conservation planning initiatives and policy associated with biodiversity science. Led by Professor Dylan Fraser, the lab's research commonly involves collaboration with governmental agencies, Indigenous communities and nongovernmental organizations.

#### LANDSCAPE ECOLOGY RESEARCH 📝

The Landscape Ecology Lab, led by Professor Jochen Jaeger, focuses on observation in support of the City Biodiversity Index, Canadian environmental impact assessment and decisionmaking, monitoring the effectiveness of wildlife passages along a Quebec highway and urban sprawl in Europe.

#### BIODIVERSITY AND BEE COMMUNITIES PROJECT 🗾 🕮

Under the leadership of professors Jean-Philippe Warren and Carly Ziter, the <u>Biodiversity and Bee Communities</u> project aims to determine which local and landscape factors most contribute to native bee communities, whether floral density, nectar volume-concentration ratios, flower colour, floral nativity or amount of impervious surface in the surrounding area. The goal is to help both the general population and urban planners to best design cities to promote native bee diversity.

#### COMMUNITY TREE INVENTORY 🗾 🕮

In addition to her work on bee communities, Professor Carly Ziter worked with students on <u>a project to map trees</u> on private land around Concordia's Loyola Campus. The project focuses on urban forest diversity and how urban tree functional diversity is distributed within Montreal's public and private green spaces. Gathering data about trees on private land is important because around half of all city trees grow there. Understanding how tree species differ between public and private green spaces is crucial to understanding the full scope of urban forest diversity and the numerous benefits it provides local communities.

## INDIGENOUS CONSERVATION AND DEVELOPMENT ALTERNATIVES

Several Concordia researchers are co-investigators at the <u>Centre for Indigenous Conservation and Development</u> <u>Alternatives</u> (CICADA), a multidisciplinary research centre that targets the conceptual and practical potential of Indigenous peoples' collective "life projects" to generate innovative regimes of environmental protection and alternative visions of development. CICADA brings together the projects and programs of more than 70 regular members and collaborators, representing great depth of experience in partnered research with Indigenous peoples globally. Affiliated faculty include professors Kevin Gould, Monica Mulrennan and Sébastien Caquard, along with adjunct faculty member Cecil Chabot.

#### PARTNERS IN INDIGENOUS CONSERVATION AND ENVIRONMENT FUTURES 🗾 🚟

Partners in Indigenous Conservation and Environment Futures (PICEF) is a research group led by Professor Monica Mulrennan. PICEF includes graduate students and postdoctoral researchers working with Indigenous partners on a variety of projects that focus on ways to enhance and support the authority and stewardship of Indigenous peoples over their land and sea territories.

#### LAND AS OUR TEACHER PROJECT 🗾 🕮

Professor Elizabeth Fast launched <u>Land as our Teacher</u> in November 2019. The project, which is supported by a Social Sciences and Humanities Research Council Insight Grant, is about restoring a sense of identity to Indigenous youth through engagement with the land and the cultural teachings that flow from it. Native Montreal and the Montreal Indigenous Community NETWORK are community partners.

## LEARNING OPPORTUNITIES RELATED TO

Students in the <u>BSc in Environmental Science</u> program study some of the most important issues we face today: climate change, natural resource management and sustainability. Those interested in issues such as forest management, plant and aquatic ecology, ecosystems or biology of pollutants can choose the ecology stream of study. Students interested in issues such as groundwater resource and pollution, environmental toxicology or geological processes can opt for the geoscience stream.

# 185 native species of trees

were planted on Loyola Campus in 2019

## SDG 16 PEACE, JUSTICE AND STRONG INSTITUTIONS

PROMOTE PEACEFUL AND INCLUSIVE SOCIETIES FOR SUSTAINABLE DEVELOPMENT, PROVIDE ACCESS TO JUSTICE FOR ALL AND BUILD EFFECTIVE, ACCOUNTABLE AND INCLUSIVE INSTITUTIONS AT ALL LEVELS

PEACE, JUSTICE AND STRONG INSTITUTIONS

#### MONTREAL INSTITUTE FOR GENOCIDE AND HUMAN RIGHTS STUDIES 88

Led by executive director Kyle Matthews, the <u>Montreal</u> <u>Institute for Genocide and Human Rights Studies</u> (MIGS) coalesces multiple initiatives under its banner as Canada's leading think tank working at the intersection of human rights, conflict and emerging technologies. MIGS serves as a leadership and ideas incubator that convenes stakeholders with the goal of developing better policies to protect human rights. Its initiatives include the <u>Will to Intervene Project</u> and the <u>Digital Mass</u> <u>Atrocity Prevention Lab</u>.

#### UNESCO CHAIR IN PREVENTION OF RADICALISATION AND VIOLENT EXTREMISM 🗹 🕿 🕮

The chair, co-held by Concordia's Vivek Venkatesh, aims to act as a centre of excellence to develop, share and promote research and actions around the prevention of violent radicalization and extremism. The chair aims to enhance cooperation between various centres and communities of practice in preventing radicalization, undertake action research projects, develop best practices, shape programs and public policy and raise awareness and visibility.

#### PROJECT SOMEONE AND PROFILE 📝 🕮

Under the leadership of Professor Vivek Venkatesh, <u>Project</u> <u>SOMEONE</u> (SOcial Media EducatiON Every day) brings together partners from across North America to build awareness, create spaces for pluralistic dialogues and combat online hate. Project SOMEONE aggregates multimedia materials, training curricula and programs to prevent hate speech and radicalization that leads to violent extremism. <u>Global Affairs Canada awarded \$1 million</u> in funding to bring the initiative to the Middle East.

**PROFILE** is a practical toolkit for community, police, health and education stakeholders in Canada to understand and combat racial and social profiling. This toolkit unpacks the problem of racial and social profiling in marginalized communities and works to develop solutions. The Canadian Commission for UNESCO partnered to launch PROFILE, which was developed by Project SOMEONE.

#### SOCIAL JUSTICE CENTRE 🗾 🕿 🕮

Led by Professor Pablo Gilabert, the <u>Social Justice Centre</u> aims to synergize Concordia's extensive expertise on social justice to further stimulate research, create collaborations between faculty members and connect them with scholars from other institutions in Canada and abroad. The centre provides support for events, offers fellowships for postdoctoral researchers and graduate students and promotes dialogue and collaboration between researchers with different backgrounds and methodologies.

## PARTNERSHIP WITH COURT OF QUEBEC

Concordia's jurist-in-residence Morton Minc has developed a partnership with the Court of Quebec on a <u>three-year pilot</u> project. The court will host up to eight students from the Law and Society minor in the Department of History, providing students with behind-the-scenes access that includes meeting with judges and lawyers, sitting in on trials and touring the facilities. Students will be accompanied by a faculty member and a judge, who will help them examine the current judicial landscape and understand challenges facing the court.

#### GOOD GOVERNANCE IN BUSINESS 🗾

#### The Institute for Governance of Private and Public

<u>Organizations</u> (IGOPP) was created in 2005 by Concordia's John Molson School of Business, HEC Montréal, the Stephen Jarislowsky Foundation and the Autorité des marchés financiers. The mission of the institute is to:

- Strengthen fiduciary governance in the public and private sectors
- Help organizations evolve from a fiduciary to a value-creating mode of governance
- Contribute to debates around and solutions to governance problems by taking positions on important issues and by widely disseminating of information and knowledge about governance

Professor Michel Magnan serves on the IGOPP Board of Directors.

#### LEARNING OPPORTUNITIES RELATED TO PEACE, JUSTICE AND STRONG INSTITUTIONS 🔄

Concordia offers a <u>minor in Law and Society</u>. As the influence of legal institutions in society grows, it becomes increasingly important for students to have an informed understanding of how law works and how it affects social relations. In this minor program, students study law in an interdisciplinary way — not as a set of rules but as an important discourse within society, in Quebec, in Canada and globally. Students study issues such as governance, crime, conflict and social justice from the perspectives of sociology, history, anthropology, political science and philosophy, among others.

Concordia also offers an <u>MA in Public Policy and Public</u> <u>Administration</u>. This program gives students the training needed to succeed in public service and non-governmental organizations. Students study issues of democratic governance and learn to analyze complex political situations in order to provide expert strategic advice.

The <u>School of Community and Public Affairs</u> provides a unique interdisciplinary education to undergraduate and graduate students in public policy analysis, advocacy and community and economic development. Programs include a major in First Peoples Studies, major in Community, Public Affairs and Policy Studies, and minor and Certificate in Immigration Studies.

6 research centres

at Concordia work in support of peace and social justice



## SDG 17 PARTNERSHIPS FOR THE GOALS

#### STRENGTHEN THE MEANS OF IMPLEMENTATION AND REVITALISE THE GLOBAL PARTNERSHIP FOR SUSTAINABLE DEVELOPMENT

#### CONCORDIA'S INSTITUTIONAL COMMITMENT TO THE SDGs 🗾 🕿 😂 🦨 🏦

Concordia has joined the Decade of Action with its <u>commitment to the UN Sustainable Development Goals</u> (SDGs). The university will create learning opportunities and forge new partnerships and research collaborations to advance the global objectives.

#### SUSTAINABLE DEVELOPMENT NETWORKS 🕮

Concordia is a member of <u>Sustainable Development Solutions</u> <u>Network (SDSN) Canada</u>, part of a global SDSN movement to build a network of universities, colleges, research centres and knowledge institutions to promote practical solutions for sustainable development. With over 1,300 participating institutions worldwide, SDSN members work together to support action-oriented research to address some of the world's most pressing problems, including the implementation of the UN SDGs and the Paris Climate Agreement.

Concordia has also joined the <u>University Global Coalition</u>, which is a collaborative platform of globally engaged universities and higher education associations working in partnership with the UN and other stakeholders to create a more sustainable future for all. The coalition is a global platform of universities and other higher education organizations committed to working together and in partnership with UN, SDSN and other relevant organizations in support of the SDGs both locally and globally through education, research and service missions.

In addition, Concordia recently became the first Canadian university to become a member of the <u>National Council</u> <u>for Science and the Environment</u> (NCSE), which advances informed environmental policy- and decision-making through science. NCSE engages scientists, educators, policymakers, business leaders and officials at all levels of government. Its work and programs include interdisciplinary research, scientific assessment, information dissemination, training and curriculum development

#### STUDENT-LED SUSTAINABILITY ACTION 🗢

Sustainable Concordia is an incorporated non-profit organization supported by Concordia student fees. It takes action to reform, transform and revolutionize unjust systems contributing to the climate crisis by connecting students, faculty, administration and the wider community. Among its activities, Sustainable Concordia offers an eight-week course called Organizing Sustainability: Empowerment, Justice and Practice in Community Advocacy, providing an introduction to the basics of community organizing for sustainability and environmental justice. The course is open to students, community members and others interested in environmental advocacy.

#### FUTURE EARTH COLLABORATIONS 🗾 🕿 🕮

Future Earth is a non-governmental organization that works towards a sustainable global future by developing a deeper understanding of complex Earth systems and human dynamics across disciplines. The effort to found one of the five global Future Earth hubs in Montreal was a collaboration between Montréal International, the Fonds de recherche du Québec and Montreal's academic institutions — Concordia, McGill University, Université de Montréal, UQAM, INRS, ÉTS and Polytechnique Montréal — and the Ouranos climate research consortium.

In partnership with Future Earth, Concordia has launched a scientific training program for students at the intersection of environmental science and digital innovation. The program was awarded \$1.65 million in funding, to be distributed over six years, from the Natural Sciences and Engineering Research Council of Canada (NSERC)'s Collaborative Research and Training Experience (CREATE) program. The Leadership in Environmental and Digital Innovation for Sustainability (LEADS) project is being spearheaded by Professor Damon Matthews. This NSERC CREATE program will further scientific research on climate, biodiversity and other critical sustainability goals, and support the career development of students and postdoctoral fellows entering the global sustainability community.

Professor Matthews is also taking leadership on Future Earth's Sustainability in the Digital Age initiative, which explores the opportunities and challenges of leveraging digital capabilities to drive transformative systems changes for a sustainable and equitable world. The initiative aims to forge multi-stakeholder partnerships and foster actions to make this vision a reality.

#### PUBLIC AWARENESS EFFORTS

To highlight the urgency of the Decade of Action, Concordia partnered with SDSN Canada, the McGill Sustainability Systems Initiative, the Centre interdisciplinaire de recherche en opérationalisation du développement durable, Accélérer 2030 and Montreal International to organize a panel discussion of the <u>SDGs in Quebec</u>. The panel, which included international and local experts, focused on sustainable innovation in Quebec and the types of accelerated and coordinated action needed to achieve the SDGs.

#### MUNICIPAL COLLABORATIONS 🗾 🔗 🧬

Professor Andreas Athienitis, director of the Centre for Zero Energy Building Studies, provided expert guidance on design and technology integration of the <u>Varennes Library</u>, the first institutional net-zero solar building in the country. The twostorey, 2,230-square-metre library has a 110 kW photovoltaic array on its sloped roof for solar energy collection. A net-zero energy building produces as much energy from renewable sources as it consumes.

Professor Ali Nazemi is **partnering with the City of Magog** to better understand the impacts of climate change. Professor Nazemi's research team analyzes fine-scale records of environmental variables collected from two state-of-theart weather stations installed in Magog, a city in the heart of Quebec's Eastern Townships. The goal is to provide the city of Magog with local solutions to land and water management and the potential to better prepare for extreme weather conditions, an increasingly frequent concern in the region.

#### DATA FOR THE SDGs 🗾

The <u>Matthews Climate Lab</u> produces scenarios, assesses impacts and creates models that improve our understanding of climate change, and provide guidance on how to mitigate its effects.

The <u>Cold Region Data Accessibility Portal for Quebec</u> is a collection of public data query platforms to display, analyze and compare freeze and thaw, as well as climate data, for the province of Quebec. This suite of products was created by the Water Security and Climate Change Lab, based at Concordia.

The Water Security and Climate Change Laboratory provides information for the <u>Canadian Climate Data Accessibility</u> <u>Portal</u> and other data access applications, which are used by the Government of Canada as well as provincial and local governments to access historical climate data for climate change impact assessment studies.



#### COLLABORATIVE INVESTIGATIVE JOURNALISM 🕮 📝 🗲

The Institute for Investigative Journalism unites media organizations and journalism schools across Canada in order to provide students with practical training and carry out largescale investigations in the national public interest and in the interest of sustainable development.

The institute's work on lead-tainted water, mentioned earlier in the report, is being undertaken in partnership with the Aboriginal Peoples Television Network, First Nations University of Canada and Université du Québec à Montréal.

**Project Pandemic** is a Canada-wide data project aimed at supporting community preparedness by sharing data among local, regional and national news organizations. The national effort assists news organizations by providing free up-to-theminute maps, audience engagement tools and other resources. The project harnesses a cooperative of 13 universities and colleges and the national broadcasters Global News, CTV and APTN, along with news organizations from coast to coast, including the National Observer, Regina Leader-Post, Hamilton Spectator and La Presse.

The <u>Price of Oil</u> series, launched in January 2017, gathered more than 50 journalists, students and teachers from three newsrooms — Global News, the National Observer and *The Toronto Star* — and four universities, including Concordia. The investigations involved hundreds of interviews, nearly 100 accessto-information requests and vast amounts of data.

## PARTNERSHIPS FOR SOCIAL TRANSFORMATION

The <u>SHIFT Centre for Social Transformation</u> brings together community and university partners working to respond to community-identified challenges. The centre focuses particularly on problems of systemic injustice, inequity and unsustainability. SHIFT supports existing and emerging social transformation initiatives that unite the efforts of Concordians and their partners with the goal of creating a more just, inclusive and broadly prosperous Montreal.

#### TRANFORMATIVE EXPERIENTIAL LEARNING 😂 🚭

**CEED** (Community, Empowerment, Education, Development) is an international internship program, taking Concordia students to Gulu, in northern Uganda, for three months during the summer semester. In Gulu, Concordia interns work alongside Ugandan interns on various community projects that are developed and led by CEED's Ugandan office. Current projects focus on entrepreneurship, communications, research, childhood education and sustainability. CEED internships emphasize social, community and personal development through experiential learning and cultural and skills exchange.

#### CONNECTED COMMUNITY SERVICE 줄 🕮

Concordia's <u>Community Service Initiative</u> (CSI) connects business students with non-profit organizations, social enterprises and small businesses, to generate grassroots solutions to community-identified challenges. Students in the program use their knowledge to develop marketing and communications plans, growth strategies, strategic plans for fundraising and more in an arrangement that benefits everyone involved.

#### EMBEDDED PARTNERSHIP FOR COMMUNITY DEVELOPMENT 📝 🕿 🕮

<u>Concordia has joined forces with Bâtiment 7</u> for a new kind of community research partnership. Students and faculty are learning from — and with — the community through an innovative presence at the former CN train shop in Montreal's Pointe-Saint-Charles neighbourhood. Bâtiment 7 connects the university to community mobilization efforts and grassroots urban development.

The Living Labs initiative at Bâtiment 7, which is supported by the Sustainability Action Fund and the Office of Community Engagement, aims to support sustainability-oriented projects that provide students with opportunities for experiential learning while collaborating on meaningful projects that embrace sustainability and community action.

#### SUSTAINABILITY EDUCATION 🗢

Concordia students can explore the concept and practice of sustainability through an extensive array of courses, programs, and certificates, including a Sustainability Studies minor and elective group. These two offerings are organized by the Loyola College for Sustainability and Diversity, the university's interdisciplinary hub for sustainability work.

Concordia's Massive Open Online Courses (MOOCs) provide free, accessible, quality educational resources to people across the globe interested in sustainability. Developed by the Loyola Sustainability Research Centre in collaboration with the United Nations Environment Programme (UNEP), these courses feature case studies from around the world, with contributions from expert faculty and distinguished visiting lecturers.

In partnership with Manulife Investment Management, Concordia's John Molson School of Business launched the first sustainable investing practicum at a Canadian university. The three-credit practicum will enable undergraduate business students to better understand the principles of environmental, social and governance (ESG) investment in a capital market environment. In addition to the hands-on learning opportunity the practicum represents, Manulife will sponsor up to 12 scholarships awarded annually to top performing students. Some students may also be selected for internships with Manulife.

Under the Sustainability Action Plan, Concordia has identified targets and strategies to increase access to sustainability learning opportunities into new and existing courses and programs. These opportunities will help faculty foster an understanding and practice of sustainability across the curriculum and equip graduates to link their disciplinary training to broader social, environmental and economic issues, and be ready to enact change in their respective fields.

# 23 sustainability-related programs

in 12 different departments across all four faculties

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