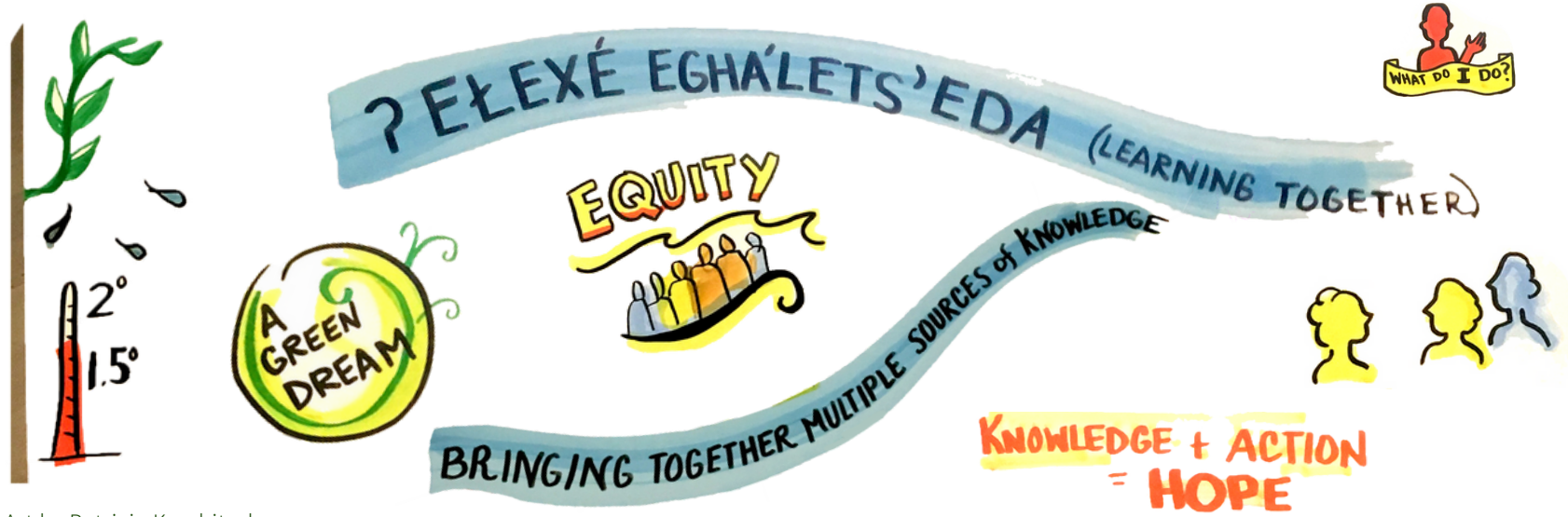
SCHOOL OF THE ENVIRONMENT

UNIVERSITY OF TORONTO

2023 - 24



Art by Patricia Kambitsch

Our goal at the School of the Environment is to create and interpret knowledge on environmental issues through outstanding academic programs, and to provide students with the skills, knowledge, and experience necessary to make a substantive difference in the world. We are focused on creating new knowledge, training future leaders, engaging and forging partnerships with the wider community, and contributing to positive environmental and social change from the local to the global scale.

The School acts as a hub for researchers and students from many different disciplines spanning the social sciences, natural sciences, and humanities, bringing together many different perspectives to bear on today's pressing environmental challenges. Our faculty and instructors are a diverse community collaborating across departments, schools, and faculties at the University of Toronto and beyond.

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DIRECTOR'S MESSAGE

Professor Steve Easterbrook,
Director, School of the Environment.

With 2023 on track to be the hottest year ever recorded, our global predicament has never been so stark. Multiple intersecting crises – climate change, biodiversity loss, persistent "forever" chemicals, rising inequality, polluted air, food, and water – pose a threat to human and ecosystem health across the entire planet. At the School of the Environment, our aim is to face up to these challenges, acknowledge their severity and urgency, and commit ourselves to the fight to overcome them.

Our students, staff, and faculty work with community groups, activists, governments, and industry to understand the causes and consequences of environmental crises, and map out just pathways to a sustainable society. And then work together to make those positive visions a reality. We know the situation is dire. But we also know that hope and action reinforce each other. We hope you will find inspiration in the work we do at the School, and invite you to join us in that work.

Steve

Steve Easterbrook
Director, School of the Environment

UNDERGRADUATE PROGRAMS

The School offers core programs in two areas: Environmental Science BSc Major and Minor, and Environment Studies BA Major and Minor. These programs are ideally suited to be taken in conjunction with other programs in a related academic field and provide students with a powerful combination of disciplinary depth and interdisciplinary breadth.

ENVIRONMENTAL SCIENCE

BSc Major and Minor

The School's Environmental Science BSc Major and Minor programs provide students with a breadth of knowledge spanning scientific disciplines, and the tools to understand and integrate scientific principles from across the physical and biological sciences. Students are exposed to disciplinary and interdisciplinary knowledge and research skills necessary to function as an environmental scientist.

ENVIRONMENTAL STUDIES

BA Major and Minor

The School's Environmental Studies BA Major and Minor programs offer rigorous academic study of the economic, social, cultural and political forces that drive issues such as biodiversity loss, air and water pollution, and climate change. The interdisciplinary structure of the programs provides grounding in scientific literacy, while advancing critical thinking skills to evaluate complex environmental problems and sustainable solutions.

Find out more about our undergraduate programs.

UNDERGRADATE PROGRAMS

COLLABORATIVE PROGRAMS

These programs are offered in collaboration with other departments in the Faculty of Arts & Science and combine the interdisciplinary focus of the environment with a traditional social science, humanities, or science discipline.

SPECIALIST: ENVIRONMENT AND TOXICOLOGY

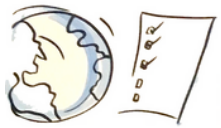
In collaboration with Pharmacology & Toxicology

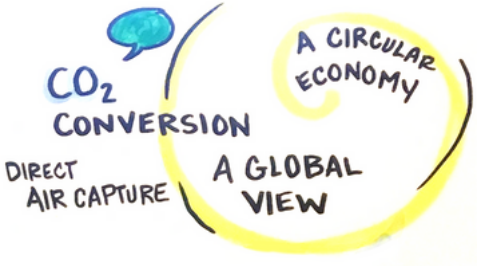
SPECIALIST: ENVIRONMENTAL GEOSCIENCES

Jointly sponsored with the Department of Earth Sciences

SPECIALIST/MAJOR: ENVIRONMENT AND HEALTH

In collaboration with the Department of Human Biology





MAJOR/MINOR: ENVIRONMENTAL ETHICS

Jointly sponsored with the Department of Philosophy

MINOR: ENVIRONMENT & ENERGY

Jointly sponsored with the Department of Geography

MINOR: ENVIRONMENT AND BEHAVIOUR

Jointly sponsored with the Department of Psychology

DIRECTED ENVIRONMENTAL MINOR PROGRAMS:

Environmental Minor programs are offered by a number of departments and are intended for students interested in acquiring a disciplinary body of environmental knowledge in a specific field. They can also be a complement to one of the core or collaborative programs offered by the School in Environmental Studies and Environmental Science.

Three of these Minors are in the sciences, and four are arts Minors.

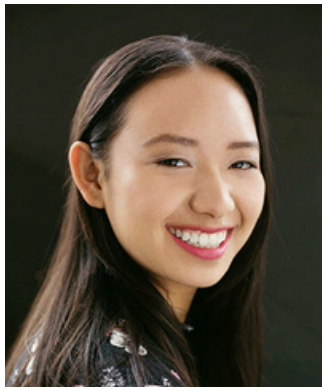
- Environmental Anthropology (BA)
- Environmental Biology (BSc)
- Environmental Chemistry (BSc)
- Environmental Economics (BA)
- Environmental Geography (BA)
- Geographic Information Systems (BA)
- Physical and Environmental Geography (BSc)

UNDERGRAD PERSPECTIVES

MIRHA SYED, CLASS OF 2023

Double Major in Environmental Studies and Political Science, and Certificate in Sustainability

"I chose to study in the School of Environment because it offers an intersectional, multidisciplinary pathway to learn about environmental issues and solutions."



SABRINA JUAN, CLASS OF 2023

BSc in Environmental Science

"I chose to study in the School of the Environment not only to build the skills and gain knowledge and perspectives to pursue my career goals in the Environmental Sciences but also to create meaningful impact in something I'm passionate about."

ADEN FISHER, CLASS OF 2023

BSc in Environmental Studies, Minors in Mathematics, and Astrophysics

"I discovered passion for food system sustainability and interest in social environmental research."

ANNABELLE BARTOS, CLASS OF 2023

Hons. BSc in Environmental Science and Physical and Environmental Geography, Certificate in Sustainability

"Studying how the environment reacts to pressures and changes to its surroundings really interested me, and the School of the Environment allowed me to learn how we can find sustainable solutions to the problems we face."

Find out more about the Class of 2023

STUDENT GROUPS

U of T student groups organize for the Global Climate Strike. Photo by Kiran Champatsingh.

Other environmental student groups include: Regenesis, BikeChain, the Green Chemistry Initiative, Leap U of T, Veg Club, U of T B.E.E.S., Jane Goodall's Roots and Shoots, and more.

Visit the Student Organization Portal for a full list.

ENVIRONMENTAL STUDENTS' UNION - ENSU

ENSU represents School of the Environment students to the University's Administration. We also conduct a mentorship program for first and second year students. Our mandate is to create and support initiatives that strive to increase sustainability and environmental awareness at the University of Toronto. This includes direct action through events, as well as education through collaboration with other organizations.

GRADUATE ENVIRONMENTAL STUDENTS' ASSOCIATION - GESA

GESA represents graduate students enrolled in the School of the Environment Graduate Collaborative Specializations. We organize social and academic events to bring to light relevant environmental issues in an informal setting, foster collaborative dialogue on a range of topics, and liaise with other environmental groups on campus.

UNIVERSITY OF TORONTO ENVIRONMENTAL ACTION - UTEA

UTEA works to raise awareness about pressing environmental issues (e.g. Indigenous water rights, sustainable energy, climate change) and advocates for more effective government policies to address these issues at the federal, provincial, and municipal levels. We also advocate for more sustainable campus policies at the University of Toronto.

UNIVERSITY OF TORONTO'S ENVIRONMENTAL RESOURCE NETWORK - UTERN

At UTERN we provide funding and act as a networking hub for any person, group or club within the university community interested in sustainability and environmentalism on campus.

CERTIFICATE IN SUSTAINABILITY

The Certificate in Sustainability is a for-credit undergraduate certificate, designed to complement any degree or discipline. It can be taken in conjunction with any undergraduate program at the Faculty of Arts & Science. Successful completion of the certificate is recorded on the academic transcript.

This certificate brings together students from the arts and sciences, to approach the topic of sustainability from multiple perspectives. Students will develop a sustainability-lens through which they can approach the rest of their academic program, career path and life in general.

STUDENTS TAKE 2.5 CREDITS COMPRISED OF:

FOUNDATIONS COURSE (0.5 CREDIT)

ENV222 Pathways to Sustainability: An Interdisciplinary Approach introduces students to sustainability studies and provides them with a sustainability lens that integrates sciences, social sciences and humanities.

ELECTIVES (1.5 CREDIT)

Students must take 1.5 credits from a curated list of existing 200- and 300-level courses and may select courses from at least two of the four clusters below:

- Cluster 1 – Environment/Ecology/Climate
- Cluster 2 – Equity/Ethics/Culture
- Cluster 3 – Economics/Development/Resources
- Cluster 4 – Food/Health/Wellbeing

CAPSTONE COURSES

The capstone courses require students to reflect on their sustainability education journey, using their guiding principles and journal reflections. Students must select one course from the three listed below:

ENV411 Sustainability Thinking (0.5 credit) provides students with an opportunity to deeply engage in the concepts and theories of sustainability from interdisciplinary perspectives.

ENV421: Community Research for Social & Environmental Change (1.0 credit) partners small groups of students (3-5) with civil society organizations to conduct research to support social and environmental justice, broadly defined. Students who take ENV421 will only take 1.0 elective credits.

ENV461 Campus as a Living Lab for Sustainability (0.5 credit) puts students into groups of 4-6 and pairs them with partners within the university looking to implement a sustainability solution or test the effectiveness of one they have already implemented.

Find out more about the Certificate in Sustainability.

TRINITY SUSTAINABILITY INITIATIVE

INTEGRATED SUSTAINABILITY PROGRAMMING

The Trinity Integrated Sustainability Initiative (TISI) is a collaboration between Trinity College and the School of the Environment made possible by a $10 million landmark gift from alumni Brian and Joannah Lawson. The TISI aims to bring sustainability to the forefront of academic programming by providing multiple curricular pathways for experiential pedagogy in the classroom, on campus, and through community partnerships. The TISI's teaching, research, and engagement agendas are strengthened through interdisciplinary partnerships with faculty in the School of the Environment and focused by three areas of emphasis: Food Systems, Health and Wellness, and Natural and Built Environments.

TRN140: ETHICS, HUMANS, AND NATURE (1.0 CREDIT)

Using field trips and nature walks, this course explores how different worldviews shape our ability to live in harmony with our environment.

TRN141: ENVIRONMENTAL SCIENCE AND PATHWAYS TO SUSTAINABILITY (1.0 CREDIT)

This course explores the intersection of science and society in complex sustainability systems. Students will conduct, critique, and communicate methods of applied environmental science.

TRN312: SUSTAINABILITY ISSUES IN ETHICS, SOCIETY, AND LAW (0.5 CREDIT)

Students examine case studies of environmental justice and engage in dialogue over the moral, relational, and practical elements of environmental decision-making.

TRN350: SCARCITY, SUSTAINABILITY, AND THE FUTURE OF INTERNATIONAL RELATIONS (0.5 CREDIT)

This course seeks to evaluate major challenges in global affairs related to natural resource scarcity and climate change. Students will use case studies to identify international challenges and develop sustainable solutions to problems confronting future generations.

EXPERIENTIAL LEARNING

Experiential learning provides students with opportunities to apply their course work outside the classroom, participate in authentic practices, develop their skills, and engage in critical reflection. The School of the Environment offers many experiential learning opportunities, including through course assignments, internships, organization-partnered projects, and field courses. Students may engage with a broad range of community partners working in the areas of climate justice, food systems, environmental health, transportation, land conservation, sustainable buildings, and more.

Campus community garden run by the student organization, Dig In! Photo by Michael Classens.

INTRODUCTORY COURSES

ENV222 - PATHWAYS TO SUSTAINABILITY: AN INTERDISCIPLINARY APPROACH

ENV316 - LABORATORY AND FIELD METHODS IN ENVIRONMENTAL SCIENCE

ENV336 - ECOLOGY IN HUMAN DOMINATED ENVIRONMENTS

CAPSTONE COURSES

ENV421 - COMMUNITY RESEARCH FOR SOCIAL AND ENVIRONMENTAL CHANGE

ENV440 - PROFESSIONAL EXPERIENCE COURSE

ENV461 - THE U OF T CAMPUS AS A LIVING LAB OF SUSTAINABILITY

ENV463 - THE EDIBLE CAMPUS

"Our collaboration project was incredible for both developing my personal interests in the environmental field and supporting a community organization that does meaningful work."
- ENV421 student

RESEARCH OPPORTUNITIES PROGRAM

The Research Opportunities Program (ENV299 & ENV399) in the Faculty of Arts & Science provides undergraduate students with the chance to join an instructor's research project and earn course credit towards their degree.

Recent ROP Projects:

- Bees for Peace: Engaging Religious Communities for Pollinator Protection
- Simulating Complexity, Chaos and Emergence
- Environmental Action in Faith Communities

"There's something really special about getting to interact closely with a student who is so early on in their academic career – the potential to have a meaningful relationship with that student and watch that student grow and learn and be a part of your work for perhaps the rest of their time in university, and perhaps beyond."
- ROP Faculty member

Gloria Gao getting up close and personal with a spotted salamander. Photo by Gloria Gao.

RESEARCH EXCURSIONS PROGRAM

The Research Excursions Program (REP) provides an opportunity for undergraduate students to travel off-campus as part of an instructor's research project, while earning a course credit. The Faculty of Arts & Science covers travel and living expenses for students to participate.
REP Highlight: EEB398 - Early spring breeding of amphibians in Algonquin Provincial Park with Professor Njal Rollinson.

Find out more about experiential learning.

CUSTOMIZE YOUR DEGREE

ENVIRONMENTAL PROGRAMS IN OTHER ACADEMIC UNITS

Programs offered by other academic units have relevance to the study of the environment, and most are suitable for double majors with the School of the Environment programs.

BIODIVERSITY & CONSERVATION BIOLOGY

Science program offered by the Department of Ecology & Evolutionary Biology
www.eeb.utoronto.ca

EARTH AND ENVIRONMENTAL SYSTEMS

Science program offered by the Department of Earth Sciences
www.es.utoronto.ca

ENVIRONMENTAL BIOLOGY

Science program offered by the Department of Ecology & Evolutionary Biology
www.eeb.utoronto.ca

ENVIRONMENTAL GEOGRAPHY

Arts program offered by the Department of Geography and Planning
www.geography.utoronto.ca

FORESTRY

Arts/Science programs offered by Daniels Forestry in the Daniels Faculty of Architecture, Landscape & Design
www.forestry.utoronto.ca

PHYSICAL & ENVIRONMENTAL GEOGRAPHY

Science program offered by the Department of Geography and Planning
www.geography.utoronto.ca

LEARNING ABROAD

SUMMER ABROAD COSTA RICA

ENV397 — A Living Laboratory for Sustainability in Practice

July (3 weeks)

Students will explore concrete sustainability initiatives in areas related to education, environmental ethics, food production, forest conservation, and energy.

TERM ABROAD

For those interested in a more immersive international experience, consider going on an exchange for a Fall or Winter term abroad. The University of Toronto has agreements with partner universities around the world, which allow you to pay your regular U of T tuition while studying abroad. There are also generous subsidies for qualified students to help with any additional costs such as airfare and room & board.

SUMMER ABROAD ECUADOR

ENV395 — Ecology and Conservation in the Amazon, Andes, and Cloud Forest

July (4 weeks)

This course examines fundamental concepts in ecology, evolution, biodiversity, and conservation biology through lectures and fieldwork in highland, tropical and island ecosystems in Ecuador.

PARTNER UNIVERSITIES WITH ENVIRONMENT PROGRAMS

- Chinese University of Hong Kong
- City University of Hong Kong
- National University of Singapore
- University of Copenhagen
- University of Amsterdam
- Utrecht University
- Lund University

Find out more about Learning Abroad opportunites.

START YOUR JOURNEY

ENVIRONMENTAL SCIENCE

Congratulations! You've been accepted to the life sciences stream at U of T.

YEAR 1

Students take basic chemistry, biology, and math courses in order to achieve a multidisciplinary science background.

Consider taking a First Year Foundations (FYF) seminar course to explore an in-depth topic with one of our professors.

YEAR 2

Students obtain a foundational knowledge in environmental science, by taking our core courses. A second year statistics course is also required.

Consider taking an **ENV299** research opportunity course, where you are matched with a faculty research project.

YEAR 3

Students are able to apply their knowledge through a field and lab based course, and a human interactions with the environment course.

Consider taking an **ENV399** research opportunity course, and/or a Learning Abroad environmental course(s) for a summer term or a semester.

YEAR 4

Students can take specialized environmental science courses, and partake in a capstone or independent study course.

Consider taking the **ENV491**, **ENV492** or **ENV493** independent studies course or one of our experiential courses.

You're a U of T graduate! You should be immensely proud of this tremendous achievement.

Visit U of T's Academic Calendar to find out more information about available courses.

ENVIRONMENTAL STUDIES

Congratulations! You've been accepted to the social sciences stream at U of T.

YEAR 1

There are no required first year courses, but students are encouraged to take ENV100 Introduction to Environmental Studies.

Consider taking a First Year Foundations (FYF) ENV seminar course to explore an in-depth topic with one of our professors.

YEAR 2

Students obtain a foundational knowledge in environmental studies, by taking our core courses.

Consider taking an **ENV299** research opportunity course, where you are matched with a faculty research project.

YEAR 3

Students take courses in Environmental Law, Policy, and Ethics, in order to grasp the social context, as well as a new foundational course, ENV338, Environmental Research Data & Decision-making.

Consider taking an **ENV399** research opportunity course, and/or a Learning Abroad environmental course(s) for a summer term or a semester.

YEAR 4

Students can take specialized environmental studies courses, and partake in a capstone or independent study course.

Consider taking the **ENV491**, **ENV492** or **ENV493** independent studies course or one of our experiential courses.

You're a U of T graduate! You should be immensely proud of this tremendous achievement.

Visit U of T's Academic Calendar to find out more information about available courses.

UNDERGRADUATE SCHOLARSHIPS

The School of the Environment offers a number of scholarships and awards for students enrolled in our major or specialist programs. The School also administers the Catherine J. Riggall Award for Contributions to Sustainability, which is available to all U of T undergraduate students. These scholarships and awards are based on student academic achievement; some also require social involvement in environmental issues and demonstrated financial need.

Frances L. Allen Scholarship
Awarded to an outstanding second or third year student.

Chachra Family Scholarship in Environmental Science
Awarded based on academic merit and financial need.

Dr. Stanley Cord Scholarship in Environmental Studies
Awarded to a third or fourth year student based on academic merit.

Barbara Green Scholarship in Environmental Entrepreneurship
Consideration is given to academic ability and involvement in extracurricular activities.

Jane Goodall Scholarship
Consideration is given to students who are focusing on studies of environment and development.

Peter John Hare Memorial Scholarship in Environment
Consideration is given to students who demonstrate financial need and social involvement in environmental issues.

Robert Hunter Scholarship
Consideration is given to students whose focus area is climate. Extra-curricular involvement is also considered.

Jane Joy Memorial Scholarship: Excellence in Environmental Sustainability
Consideration is given to students who demonstrate financial need, and involvement in sustainability.

Professor Emeritus Douglas Macdonald Memorial Scholarship
To be awarded to a full-time undergraduate student in the School of the Environment on the basis of academic merit.

Douglas Pimlott Awards
Consideration is given to students who have demonstrated a commitment to environmental issues. One award also requires demonstrated financial need.

David Powell Undergraduate Scholarship
Awarded to a student who is pursuing studies focused on sustainability and who demonstrates extracurricular engagement in environmental advocacy and activism.

Catherine J. Riggall Award for Contributions to Sustainability
Recognizes accomplishments that enhance sustainability at U of T.

Kathryn S. Rolph Scholarship
Awarded to a student who has achieved a high mark in a course on environmental issues offered by the School.

Sidney and Lucille Silver Scholarship
Awarded to an outstanding third year student in a specialist or double major program in Environmental Studies and/or Geography.

Rodney White Environmental Studies Scholarship
Consideration is given to third year students studying topics relating to the environment and international development.

Skip Willis Undergraduate Scholarship
Consideration is given to students with an interest in climate change and market-based solutions.

Find out more about undergraduate scholarships and awards.

UNDERGRADUATE APPLICATIONS

PROSPECTIVE STUDENTS

Apply using the online Ontario Universities' Application Centre (OUAC). Ontario students should use the OUAC 101 category, and all others should use the OUAC 105 category.

- If you wish to study Environmental Studies, use the OUAC code TAX (Social Sciences).
- If you wish to study Environmental Science, use the OUAC code TLG (Life Sciences).

Note: Official direct enrolment in or applications for Programs of Study occur at the end of your first year.

FIRST YEAR STUDENTS

Program of study enrolment and applications occur at the end of your first year.

- Environmental Studies is an open program, meaning that you can automatically enroll after completing any 4 credits.
- Environmental Science is a limited program, which has specific course prerequisites and has limited enrolment.

- U of T's Arts & Science Calendar has important information about courses, program and degree requirements, student services and resources, and rules and regulations.
- Plan your course schedule using the Arts & Science online timetable builder.
- Find out more information about the Arts & Science application process as a prospective student (including deadlines, English requirements, international student info).

- For information and assistance with undergraduate courses and programs please contact David Powell, Undergraduate Student Advisor, to book an appointment.

  Email: ug.office.env@utoronto.ca
  Office: Earth Sciences, ES1022

WHERE THE SCHOOL CAN

David Berliner (2009), BSc Specialist in Environment and Health

Co-founder and CEO of CoPower
"My program gave me a scientific base to understand the pressing environmental challenges of our time, and allowed me to dabble in the legal, policy, and financial perspectives. This helped me ultimately decide that the environmental policy/finance area was where I wanted to pursue my career."

Stephanie Cairns (1986), BA in Environmental Studies, Political Science, and Economics

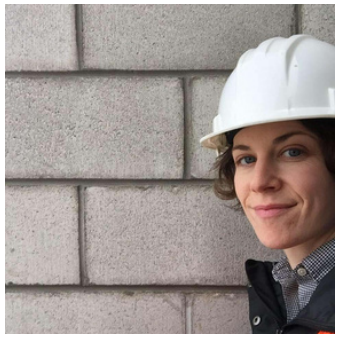
Consulting Principal, Wrangellia Consulting; Director, Circular Economy at Smart Prosperity Institute (University of Ottawa)
"The University of Toronto introduced me to the very important network of people to keep in touch with. They provided valuable career suggestions and opportunities. My degree also sparked a passion for and interest in the field of environmental studies."

Kady Cowan (2002), Hons. BSc, Double Major in Environmental Science, and Physical Geography

Supervisor, Energy Business Partnerships at Independent Electricity System Operator
"My Environmental Science degree helped me understand systems thinking and how to value the whole in addition to the component parts. Knowledge from nature and ecosystems, and concepts from sustainability connect the natural environment and the built environment so a clear big picture can emerge."

Find out more about our alumni.

TAKE YOU



Car Martin (2005), BA Double Major in Environmental Studies, and International Development

Architectural Designer at Creative Union; Faculty Member at George Brown College School of Design
"My time at the University of Toronto helped me understand the various connections between social issues and design, especially regarding the development of the built environment in urban centres. This has led me towards a relevant, unique, and exciting field."

Victoria Shirriff (2017), Hons. BSc Major in Human Biology-Global Health, Double Minor in Environmental Science, and Environmental Studies

Public Health Advisor- U.S. Centers for Disease Control (CDC) and Prevention
"The Environmental Studies program was integral in shaping my career. My first environmental course was ENV222 with Professor Karen Ing, which I took as an elective. This course was a turning point in my academic journey. I was interested in the world around us and how it impacts our health, yet learning from Professor Ing helped me hone in on my interests."

Joseph Witkin (2017), Hons. BSc Major in Environmental Science, and Minors in Environment Energy, Buddhism Psychology and Mental Health

Sustainability and Health - Building/Organizational Consultant
"I originally was considering a career purely in health, but I found that the issues of climate change and sustainability were too compelling. It was something I had to do. Courses in the School of the Environment were pivotal in coming to that decision. When I fully understood the climate change issue, I wanted to take direct actions to reduce the problem. "

OUR FACULTY

PROF. CHRISTIAN ABIZAID

Joint with the Department of Geography & Planning

• Environment and development • Rural livelihoods • Tropical forests •

PROF. SIMON APPOLLONI

School of the Environment

• Environmental ethics • Environmental humanities • Worldviews & beliefs •

PROF. MICHAEL CLASSENS

School of the Environment

• Critical pedagogy • Food systems • Social movements • Political ecology • Environmental history •

PROF. MIRIAM DIAMOND

Joint with the Department of Earth Sciences

• Human and ecosystem contaminant exposure • Contaminant sources and transport • Chemicals management •

PROF. STEVE EASTERBROOK

Department of Computer Science

• Climate informatics and modelling • Earth system models • Systems thinking • Climate data analysis •

PROF. MEREDITH FRANKLIN

Joint with the Department of Statistical Sciences

• Environmental & spatial statistics • Remote sensing• Environmental epidemiology •

PROF. JESSICA F. GREEN

Joint with the Department of Political Science

• Climate policy • Carbon markets • Global governance • NGOs •

PROF. KAREN ING

School of the Environment

• Environmental education • Ecosystem services and well-being •

PROF. J. ALSTAN JAKUBIEC

Joint with Daniels Faculty of Architecture, Landscape, and Design

• Sustainable design • Low energy design •

PROF. KARIUKI KIRIGIA

Joint with the African Studies Centre

• Climate policy & politics • Ecology & biodiversity • food & agriculture • Social & environmental justice •

PROF. TERESA KRAMARZ

School of the Environment

•Environmental accountability • Partnerships in environmental governance • • Renewable energy and just transitions •

PROF. VIANEY LEOS BARAJAS

Joint with the Department of Statistical Sciences

• Statistical ecology • Environmental statistics •

OUR FACULTY

PROF. HANNA E. MORRIS

School of the Environment

• Climate change communication • Transnational climate movements • Authoritarianism and the climate crisis •

PROF. KATE NEVILLE

Joint with the Department of Political Science

• Resource governance and energy transitions • Social movements and resistance • Fracking and biofuels •

PROF. HUI PENG

Joint with the Department of Chemistry

• Environmental chemistry • Analytical chemistry • Toxicology •

PROF. SCOTT PRUDHAM

Joint with the Department of Geography & Planning

• Environmental justice • Political ecology • Capitalism-nature nexus •

PROF. JOHN ROBINSON

Joint with the Munk School of Global Affairs & Public Policy

• Sustainable buildings & cities • Community engagement & futures studies • Sustainability transitions & transformations • Philosophy of sustainability •

PROF. NJAL ROLLINSON

Joint with the Department of Ecology & Evolutionary Biology

• Animal life cycles • Ecology • Evolution •

PROF. STEPHEN SCHARPER

Joint with the Department of Anthropology

• Environmental ethics • Worldviews and ecology • Liberation theology •

PROF. ROBERT SODEN

Joint with the Department of Computer Science

• Human-computer interaction • Participatory sensing • Crisis Informatics • Critical computing •

PROF. NICOLE SPIEGELAAR

Joint with Trinity College

• Environmental psychology • Indigenous-environment relations • Food systems •

PROF. CLARE WISEMAN

School of the Environment

• Urban health • Traffic-related air pollution • Metal Exposures and impacts •

PROF. DEBRA WUNCH

Joint with the Department of Physics

• Earth's carbon cycle • Atmospheric greenhouse gases •

PROF. TANHUM YOREH

School of the Environment

• Religion and environmentalism • Environmental humanities • Faith-based environmental ethics •

GRADUATE PROGRAMS

MES Master of Environment & Sustainability

The MES is an intensive, 12-month research-stream program that responds to the growing need of society to understand and develop solutions to the environmental and human well-being challenges facing us in the 21st century. Upon graduation, MES graduates will have acquired a transdisciplinary perspective on environmental issues, learned to use methodologies and tools relevant to environmental protection and sustainability solutions, and will be well prepared for a variety of careers in the private, not-for profit, and public sectors, or for further studies at the doctoral level.

- Build transdisciplinary connections across the sciences, social sciences, and humanities to inform policy.
- Join the first research-based master of environment program at the University of Toronto.
- Participate in experiential learning components.
- Belong to a small, intimate cohort-based program with the opportunity to work closely with faculty.

SUPERVISION

To encourage transdisciplinary perspectives, each MES student will have an advisory committee comprised of a thesis advisor and two other faculty members from two disciplines or academic units.

This hands-on supervision of students guarantees the quality of student learning overall. By working closely with their individual thesis advisor and advisory committees on an extended project, students can anticipate a strong and effective learning environment.

Applicants are strongly encouraged to connect with potential thesis supervisors prior to applying. Check our faculty page on the website for a list of potential MES thesis advisors.

Find out more about the MES.

MES COURSES

MES students complete 6 seminar-style courses (3.0 credits), 3 of which are required and 3 electives. In their final session, students write their thesis (1.0 credit).

ENV1103: CAMPUS AS A LIVING LAB (REQUIRED)

Our Living Laboratory approach explores new ideas for sustainable buildings, food systems, transportation, energy, and human health. Students engage with the U of T community on innovative sustainability projects while developing the leadership skills needed to apply these ideas beyond the campus after they graduate.

ENV1197 & ENV1198: RESEARCH IN ENVIRONMENT AND SUSTAINABILITY, I & II (REQUIRED)

These required courses will prepare students for their thesis by allowing them to:

- Identify and develop thesis topic
- Draft a research proposal
- Prepare for data collection/ fieldwork
- Interact with faculty members

ELECTIVES (1.5 CREDITS)

MES students complete 3 electives towards their degree from an array of graduate units, such as public health, forestry, geography and planning, chemistry, physics, political science, anthropology, social justice education, and engineering. Taking diverse electives allows students to have a transdisciplinary approach to their thesis topic and degree. Students are encouraged to seek out unlisted electives that support their research projects in consultation with their supervisors.

ENV1199: THESIS (REQUIRED)

During the summer term, students write a 15,000-word thesis (1.0 FCE), working with their supervisor and two committee members. At the end of the program, students will present their thesis research to faculty, the incoming MES cohort, and the wider public at the annual MES Research Showcase.

APPLICATION PROCESS

ADMISSION REQUIREMENTS

- The deadline to apply is January 5, 2024
- The minimum admission requirement is a HBSc or HBA with at least a minor in environment, sustainability or a closely related field, or commensurate experience
- Minimum B+ average in each of the last two years of your undergraduate degree

APPLICANTS SUBMIT:

- A letter of intent and optional diversity statement
- Transcripts from each institution attended
- Resume/CV
- Two letters of recommendation
- Proof of English Language Proficiency (if necessary)
- Application fee ($125.00)

School of Graduate Studies admissions.

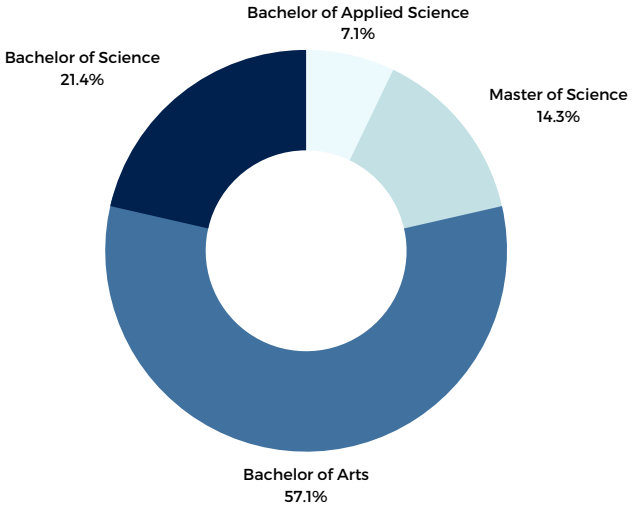
MES TUITION AND FUNDING

The MES is an unfunded program with tuition fees for 2022-23 being set at **$8,214 for domestic students, and $31,660** for international students. The School of the Environment assists students with their tuition through entrance scholarships, awards, Research Assistantship funding and the opportunity to apply for Teaching Assistant positions.

APPLY FOR GOVERNMENT AWARDS

- **Canadian Graduate Scholarships Program** — Masters: aims to help develop the research skills and assist in the training of highly qualified personnel by supporting students who are early in their graduate studies. Valued at $17,500 for 12 months. Domestic students can apply by December 1st.
- **Ontario Graduate Scholarship Program**: recognizes academic excellence in graduate studies in all disciplines of academic study. Valued at $5,000 per session for 2 or 3 consecutive sessions. International/domestic students can apply by April/May.

INCOMING DEGREE 2023 -24 COHORT



CLASS OF 2023

KRISTEN MA, ENVIRONMENT AND GEOGRAPHY

"The MES program integrates core courses on environment and sustainability and different concentrations, allowing us to choose what we want to learn based on our interests and preferences. The research component in this program also interested me, as it will provide me with hands-on experience on the methodologies that can help transit to a low-carbon, more sustainable, and resilient future."

NOSHIN NOWER, DISASTER SCIENCE AND MANAGEMENT

"The most unique feature of the MES program is the interdisciplinary approach to problem solving, which allows us to elect courses relevant to our research interests from various departments."

ZEINA SEAIFAN, ENVIRONMENTAL SCIENCE & DIASPORA AND TRANSNATIONAL STUDIES

"I was highly interested in the emphasis of interdisciplinary learning conducted through a transdisciplinary lens, and the opportunity to utilize the cross-disciplinary education I received from my undergraduate experience while deepening my understanding of sustainability."

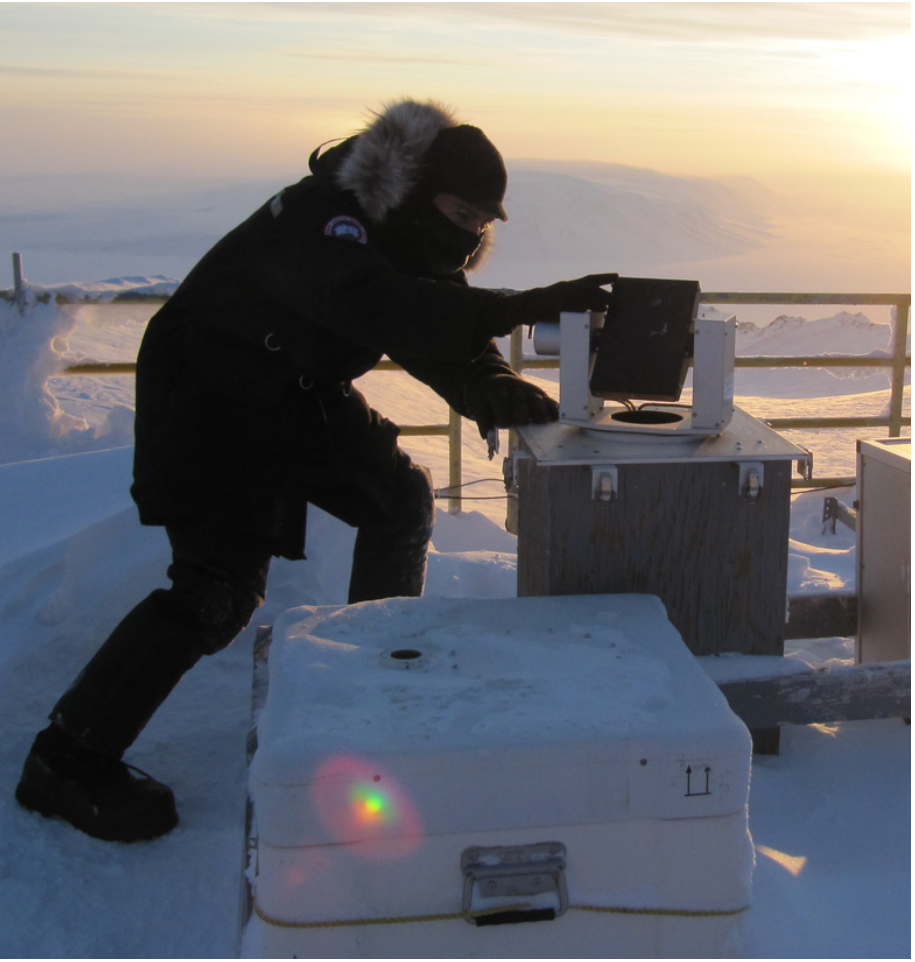
YICHEN WU, ENVIRONMENTAL SCIENCE, AND INTERNATIONAL FORESTRY

"The brand-new MES program offers student both academic and professional training in global climate challenges, I was quite honored to join the first MES cohort."

Read more about the MES Class of 2023.

GRADUATE PROGRAMS

COLLABORATIVE SPECIALIZATIONS



Dan Weaver conducting research at the Polar Environmental Atmospheric Research Laboratory (PEARL).

The School of the Environment's Collaborative Specializations in **Environmental Studies** and **Environment and Health** offer students enrolled in a graduate degree program elsewhere at U of T the opportunity to specialize and explore an interdisciplinary area that complements their existing degree program. There are no additional fees to participate in a Collaborative Specialization.

Students enrolled in our Collaborative Specializations have access to the following opportunities:

- An array of courses with an environmental focus
- Experiential learning through internships and campus as a living lab courses
- Research experience through environment-focused theses/ research papers and the option to present at an annual event
- Numerous guest lectures, panels, symposiums, and events
- Belong to a network of students and faculty from across all three U of T campuses
- Awards and scholarships that are internal to School of the Environment graduate students
- A transcript notation and certificate upon completion/convocation highlighting the collaborative specialization in environment

Find out more about the Collaborative Specializations.

COLLABORATIVE SPECIALIZATION IN ENVIRONMENTAL STUDIES

The Collaborative Specialization in Environmental Studies provides students an opportunity to examine environmental-related issues from different disciplinary perspectives and apply interdisciplinary concepts, approaches, methods, and tools in environmental decision making.

Students admitted to a graduate degree program in a participating department can apply to the Collaborative Specialization in Environmental Studies to pursue coursework and research on topics related to the environment. The purpose is to complement the discipline-based learning and research focus of their home units by providing students an interdisciplinary forum to examine, discuss, and address environmental issues.

With participating students from as many as 20 different disciplines, the core course, ENV1001H Environmental Decision Making, gives students a unique opportunity to engage with faculty and peers coming from a range of academic backgrounds and perspectives.

Daniel Cowan, Master of Business Administration, Collaborative Specialization in Environmental Studies, Class of 2020

"After graduate school my aspiration was to contribute to movements challenging the status quo of how the business world has operated for so long. The classes I took in the specialization honed a deeper knowledge in a range of environmental topics and developed my critical thinking skills through an applied learning approach. This culminated in a confidence building independent study. This cross-discipline study contributed to my mixed-method analysis and recommendations for how resource and financial institutions could achieve ambitious environmental and social goals."

Find our more about the Collaborative Specializations in Environmental Studies.

GRADUATE PROGRAMS

COLLABORATIVE SPECIALIZATION IN ENVIRONMENT AND HEALTH

The Collaborative Specialization in Environment and Health (CSEH) is appropriate for students in the health sciences who want a broader environmental perspective on health-related issues, and for students in environmental studies and sciences seeking insight into the health implications of environmental quality. This specialization may also be of interest to students who are concerned with ethical, pedagogical, and policy approaches to environment and health issues.

The study of environment and health recognizes that human health is fundamentally dependent on a healthy environment. With a focus on understanding the human health implications of chemical, biological, and physical hazards in our environment, it encompasses topics such as the health impacts of air and water quality, climate change, contaminated lands and urban design, and the need for interdisciplinary approaches to address them.

Emiko Newman, Master of Education in Social Justice Education, Collaborative Specialization in Environment and Health, Class of 2022

"One of the main factors influencing my decision to apply for U of T was the collaborative specializations offered by the School of the Environment. Although my home department is Social Justice Education at OISE, I have been able to complement those courses with environmental courses and focus on my passion: climate justice. My involvement with the Environment and Health specialization deepened my understanding of interdisciplinarity and allowed me to collaborate with students from across the university. It also brought me to the Graduate Environmental Students' Association (GESA); being an executive member for the past two years has contributed significantly to my overall graduate experience!"

Find our more about the Collaborative Specializations in Environment and Health.

GRADUATE SCHOLARSHIPS

SCHOOL OF THE ENVIRONMENT AWARDS FOR CURRENT MES AND COLLABORATIVE SPECIALIZATION STUDENTS

John R. Brown Award
Awarded to a qualified graduate student for the best-applied research project dedicated to the analysis and improvement of occupational and environmental health.

Sperrin Chant Award
Awarded to a student doing research in toxicology and who demonstrates academic excellence, strength of character, and financial need.

Marjorie Gillespie Bolton and Mabel Gillespie Norris Memorial Scholarship
Awarded to a graduate student(s) with demonstrated financial need and whose academic focus is on sustainability, environmental justice, biodiversity, and/or conservation.

Eric David Baker Krause Graduate Fellowship
Awarded to a graduate student enrolled in a School of the Environment based on the applicant's record of financial need and academic excellence.

Arthur and Sonia Labatt Fellowships
Awarded to students who are exploring practical based solutions to environmental issues and/or examining marketplace for solutions to environmental issues.

George Burwash Langford Award
Preference given to a student who combines excellence in research in environmental studies/environment and health and contributes to the work of the School of the Environment.

Alexander B. Leman Memorial Award
Restricted to master's and doctoral students enrolled in a Collaborative Specialization at the School of the Environment and the Department of Geography's Program in Planning.

MES Scholarship
To be awarded to one or more full-time graduate student(s) enrolled in the Master of Environment & Sustainability program at the School of the Environment on the basis of academic merit.

Beatrice and Arthur Minden Graduate Research Fellowship
Awarded to one or more PhD students enrolled one of the School of the Environment's Collaborative Specialization to provide them with support during the research stage of their dissertations.

Alan H. Weatherly Graduate Fellowship in Environmental Leadership
Awarded annually to one PhD student enrolled one of the School of the Environment's Collaborative Specializations, to encourage their research and academic achievement.

Find our more about graduate scholarships.

RESEARCH

The research we do at the School is inherently transdisciplinary. Our approach is to build diverse networks of knowledge and expertise – both within and beyond the university – to identify urgent research questions and support the collaborative work of addressing them. These pages offer a taste of the breadth of our research program.

Biodiversity and Conservation

From turtles to sharks to mycobacteria and beyond, our research explores ecology and evolution in a rapidly changing world. Our work includes studies of animal life cycles, behavioral variation, and responses to habitat loss. We aim to better understand how animals respond to environmental variation, with the goal of helping conserve our planet's biodiversity.

Environmental Worldviews

Environmental worldviews are the manifold values and beliefs that shape how individuals and communities engage with and use the world. They can contribute to beneficial and detrimental environmental outcomes. Our research explores the origins and ways in which these worldviews have been conceptualized over time and place, particularly in faith communities.

COLLABORATIVE NETWORKS

Climate Justice

Research on climate justice examines the asymmetries of power, uneven impacts, and longstanding inequities that lie at the crux of the climate crisis. Through a focus on historical contexts and decision-making processes that span local, regional, national, and international scales of governance, this research questions how and why historically marginalized groups are often the most negatively impacted by climate change and yet also the most excluded from climate policymaking processes.

Pollutants and Health

Chemical pollution and waste are one of the triple threats facing humanity. We conduct solutions-driven research aimed at influencing positive change. Our research includes documenting concentrations and sources of microplastics and chemicals of concern (because of their toxicity and/or persistence), and research to advance chemicals management. Our audiences include the private sector such as retailers and chemical producers, the public to enable informed choices, and policy makers who can enable legislation.

Food Systems

Every time we eat we're pulled into social and ecological processes and relationships connecting us to people and places around the world, and around the corner. Figuring out how to organize food systems that regenerate ecologies while building socially just relationships drives our work. This brings us into conversation with equity-deserving rural farmers, youth climate and food justice activists in Toronto, campus-based farmers, and many others working to realize more socially just and ecologically rational food systems.

RESEARCH

Environmental Data Science

We bring together researchers across broad fields to develop statistical, machine learning and AI tools for modeling of environmental and ecological data. From forecasting climate trends and modeling the impact of air quality on human health, to modeling shark movements and classifying fish with sound, our research provides data-driven understanding and solutions to pressing environmental and ecological questions.

Healthy and Sustainable Buildings

Our healthy and sustainable buildings research aims to understand the spaces we inhabit every day, from commercial buildings to homes, in order to reduce energy consumption and improve health and wellbeing. We study the indoor environmental quality and social activities within buildings, collect environmental measurements, and use building performance simulations to predict energy consumption in pursuit of these goals.

Sustainability Pedagogy

Our research and teaching on sustainability mindsets seeks to empower future leaders with the ability to approach complex, real-world issues, this spans from tangible skills for measuring complex socioecological factors and the ability to understand these from multiple worldviews, to a personal sense of connectedness, psychological resiliency, and empowerment to bring about change.

COLLABORATIVE NETWORKS

Toronto Climate Observatory

The Toronto Climate Observatory (TCO) is a new interdisciplinary initiative hosted at the University of Toronto. Our mission is to reimagine how communities around the Greater Toronto Area (GTA) understand and adapt to the impacts of climate change, and support place-based, plural, and just climate action. Through partnerships with scholars, government, and civil society, we are working to develop the next generation of climate informatics. We draw inspiration and methods from climate modeling, human centered design, Science and Technology Studies (STS), Indigenous scholarship, oral history, citizen science, and art/science collaboration.

Environmental Governance Lab

The Environmental Governance Lab is a home for research, a node in global networks on environmental governance and transformative policy, and a platform for knowledge exchange with practitioners, policy makers, and the public. The EGL is housed at the Department of Political Science and the School of the Environment. It is also a Research Centre of the Earth System Governance Project — a global research alliance that is the largest social science research network on governance and global environmental change.

Cover: Hawksbill Sea Turtle, Raja Ampat, Indonesia
Photo by Kiran Champatsingh.

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