2020-2021 Graduate Calendar

The information published in this Graduate Calendar outlines the rules, regulations, curricula, programs and fees for the 2020-2021 academic year, including the Summer Semester 2020, Fall Semester 2020 and the Winter Semester 2021.

For your convenience the Graduate Calendar is available in PDF format.

If you wish to link to the Graduate Calendar please refer to the Linking Guidelines.

The University is a full member of:

- Universities of Canada

Contact Information:

University of Guelph
Guelph, Ontario, Canada
N1G 2W1
520-824-4121

Revision Information:

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 25, 2020</td>
<td>Initial Publication</td>
</tr>
<tr>
<td>June 3, 2020</td>
<td>Revision 1</td>
</tr>
</tbody>
</table>
Disclaimer

The information published in this Graduate Calendar outlines the rules, regulations, curricula, programs and fees for the 2020-2021 academic year, including the Summer Semester 2020, the Fall Semester 2020 and the Winter Semester 2021.

The University reserves the right to change without notice any information contained in this calendar, including but not limited to that related to tuition and other fees, standards of admission, course delivery or format, continuation of study, and the offering or requirements for the granting of, degrees or diplomas in any or all of its programs. The publication of this calendar does not bind the University to the provision of courses, programs, schedules of study, or facilities as listed herein.

The University will not be liable for any failure or delay in performance arising out of any cause or causes beyond its reasonable control. Such causes may include but are not limited to fire, strike, lock-out, inability to procure materials or trades, war, mass-casualty event, flood, local, regional or global outbreak of disease or other public health emergency, social distancing or quarantine restriction, legislative or regulatory requirements, unusually severe weather, failure of public utility or common carrier, or attacks or other malicious act, including but not limited to attacks on or through the internet, or any internet service, telecommunications provider or hosting facility.

In March 2020 the World Health Organization declared a global pandemic of the virus leading to COVID-19. The Governments of Canada, the Province of Ontario, and local Governments responded to the pandemic with legislative amendments, controls, orders, by-laws, requests and requirements (collectively, the "Governmental Response"). It is uncertain how long the pandemic, and the related Governmental Response, will continue, and it is unknown whether there may be a resurgence of the virus leading to COVID-19 or any mutation thereof (collectively, the “Virus”) and resulting or supplementary renewed Government Response. Without limiting the foregoing paragraph, the University shall not be liable for costs associated with any failure or delay in performance arising out of:

   a. the continued spread of the Virus;
   b. the continuation of or renewed Governmental Response to control the spread of the Virus; and
   c. a University decision, made on an organization-wide basis and in good faith, to control the spread of the Virus, even if exceeding the then current specific Government Response.

In particular, the COVID-19 pandemic may necessitate a revision of the format of course offerings such that courses are offered in whole or in part on an alternate delivery model to in-person classes. Tuition and mandatory fees have been set regardless of the method of instruction and will not be refunded in the event instruction occurs remotely for any part of the academic year.

Dates or times of performance including the Schedule of Dates may be extended as appropriate and the University will notify students promptly of the existence and nature of such delay and shall, so far as practicable, use reasonable efforts to minimize and mitigate any such delay or non-performance.

In the event of a discrepancy between a print version (downloaded) and the Web version, the Web version will apply.

The University of Guelph reaffirms section 1 of the Ontario Human Rights Code, 1981, which prohibits discrimination on the grounds of race, ancestry, place of origin, colour, ethnic origin, citizenship, creed, sex, sexual orientation, handicap, age, marital status or family status.

The university encourages applications from women, aboriginal peoples, visible minorities, persons with disabilities, and members of other under-represented groups.
Introduction

Collection, Use and Disclosure of Personal Information

Personal information is collected under the authority of the University of Guelph Act (1964), and in accordance with Ontario's Freedom of Information and Protection of Privacy Act (FIPPA) [http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/90f31_e.htm]. This information is used by University officials in order to carry out their authorized academic and administrative responsibilities and also to establish a relationship for alumni and development purposes. Certain personal information is disclosed to external agencies, including the Ontario Universities Application Centre, the Ministry of Advanced Education and Skills Development, and Statistics Canada, for statistical and planning purposes, and is disclosed to other individuals or organizations in accordance with the Office of Registrarial Services Departmental Policy on the Release of Student Information. For details on the use and disclosure of this information call the Office of Registrarial Services at the University at (519) 824-4120 or see [https://www.uoguelph.ca/registrar/](https://www.uoguelph.ca/registrar/).

Statistics Canada - Notification of Disclosure

For further information, please see Statistics Canada's web site at [http://www.statcan.gc.ca](http://www.statcan.gc.ca) and Section XIV Statistics Canada.

Address for University Communication

Depending on the nature and timing of the communication, the University may use one of these addresses to communicate with students. Students are, therefore, responsible for checking all of the following on a regular basis:

Email Address

The University issued email address is considered an official means of communication with the student and will be used for correspondence from the University. Students are responsible for monitoring their University-issued email account regularly.

Home Address

Students are responsible for maintaining a current mailing address with the University. Address changes can be made, in writing, through Registrarial Services.

Name Changes

The University of Guelph is committed to the integrity of its student records, therefore, each student is required to provide either on application for admission or on personal data forms required for registration, their complete, legal name. Any requests to change a name, by means of alteration, deletion, substitution or addition, must be accompanied by appropriate supporting documentation.

Student Confidentiality and Release of Student Information Policy Excerpt

The University undertakes to protect the privacy of each student and the confidentiality of their record. To this end the University shall refuse to disclose personal information to any person other than the individual to whom the information relates where disclosure would constitute an unjustified invasion of the personal privacy of that person or of any other individual. All members of the University community must respect the confidential nature of the student information which they acquire in the course of their work.

Complete policy at [https://www.uoguelph.ca/secretariat/office-services/university-secretariat/university-policies](https://www.uoguelph.ca/secretariat/office-services/university-secretariat/university-policies).
Learning Outcomes

Graduate Degree Learning Outcomes

On May 27, 2013, the University of Guelph Senate approved the following five University-wide Learning Outcomes as the basis from which to guide the development of graduate degree programs, specializations and courses:

1. Critical and Creative Thinking
2. Literacy
3. Global Understanding
4. Communication
5. Professional and Ethical Behaviour

These learning outcomes are also intended to serve as a framework through which our educational expectations are clear to students and the broader public; and to inform the process of outcomes assessment through the quality assurance process (regular reviews) of programs and departments.

An on-line guide to the learning outcomes, links to the associated skills, and detailed rubrics designed to support the development and assessment of additional program and discipline-specific outcomes, are available for reference on the Learning Outcomes website.

Critical and Creative Thinking

Critical and creative thinking is a concept in which one applies logical principles, after much inquiry and analysis, to solve problems with a high degree of innovation, divergent thinking and risk taking. Those mastering this outcome show evidence of integrating knowledge and applying this knowledge across disciplinary boundaries. Depth and breadth of understanding of disciplines is essential to this outcome. At the graduate level, originality in the application of knowledge (master’s) and undertaking of research (doctoral) is expected. In addition, Critical and Creative Thinking includes, but is not limited to, the following outcomes: Independent Inquiry and Analysis; Problem Solving; Creativity; and Depth and Breadth of Understanding.

Literacy

Literacy is the ability to extract information from a variety of resources, assess the quality and validity of the material, and use it to discover new knowledge. The comfort in using quantitative literacy also exists in this definition, as does using technology effectively and developing visual literacy.

In addition, Literacy includes, but is not limited to, the following outcomes: Information Literacy, Quantitative Literacy, Technological Literacy, and Visual Literacy.

Global Understanding

Global understanding encompasses the knowledge of cultural similarities and differences, the context (historical, geographical, political and environmental) from which these arise, and how they are manifest in modern society. Global understanding is exercised as civic engagement, intercultural competence and the ability to understand an academic discipline outside of the domestic context.

In addition, Global Understanding includes, but is not limited to, the following outcomes: Global Understanding, Sense of Historical Development, Civic Knowledge and Engagement, and Intercultural Competence.

Communication

Communication is the ability to interact effectively with a variety of individuals and groups, and convey information successfully in a variety of formats including oral and written communication. Communication also comprises attentiveness and listening, as well as reading comprehension. It includes the ability to communicate and synthesize information, arguments, and analyses accurately and reliably.

In addition, Communication includes, but is not limited to, the following outcomes: Oral Communication, Written Communication, Reading Comprehension, and Integrative Communication.

Professional and Ethical Behaviour

Professional and ethical behaviour requires the ability to accomplish the tasks at hand with proficient skills in teamwork and leadership, while remembering ethical reasoning behind all decisions. The ability for organizational and time management skills is essential in bringing together all aspects of managing self and others. Academic integrity is central to mastery in this outcome. At the graduate level, intellectual independence is needed for professional and academic development and engagement.

In addition, Professional and Ethical Behaviour includes, but is not limited to, the following outcomes: Teamwork, Ethical Reasoning, Leadership, Personal Organization and Time Management, and Intellectual Independence.
# Table of Contents

- Conservation Leadership ................................................................. 32
- Administrative Staff ........................................................................ 32
- Graduate Faculty ............................................................................. 32
- MCL Program .................................................................................. 32
- Courses ........................................................................................... 32
Conservation Leadership

The Master of Conservation Leadership combines learning across a wide spectrum of conservation sciences with leadership studies to build capacity within the conservation sector to address complex challenges faced by conservation professionals and organizations. Graduates will be equipped to catalyze transformative change throughout the sector.

Administrative Staff

Graduate Program Coordinator
Robin Roth (HUTT 122, Ext. 53525)
robin.roth@uoguelph.ca

Graduate Program Assistant
Alex Knapp (TBD, Ext. )
mconslead@uoguelph.ca

Graduate Faculty

Stephen Crawford
Associate Professor, Integrative Biology

Noella Gray
Associate Professor, Geography, Environment and Geomatics

John Fryxell
Professor, Integrative Biology

Jamie Gruman
Professor, Management

Phil Loring
Associate Professor, Geography, Environment and Geomatics

Faisal Moola
Associate Professor, Geography, Environment and Geomatics

Robin Roth
Associate Professor, Geography, Environment and Geomatics

Jennifer Silver
Associate Professor, Geography, Environment and Geomatics

WanHong Yang
Professor, Geography, Environment and Geomatics

MCL Program

The objective of the Master of Conservation Leadership is to provide early to mid-career working professionals employed in conservation, resource management, and environmental governance an opportunity to upgrade their knowledge base, enhance their research skills, and develop their leadership skills to address complex conservation issues at local, regional, and global scales.

The program is comprised of three residency components, online interactive learning modules, an Individualized Development Plan (IDP), and a final learning portfolio that addresses a contemporary need in the sector, preferably identified in collaboration with the student’s employer and/or stakeholders. The program has been intentionally designed to be completed in 24 months of full-time study, leading to a Master of Conservation Leadership.

Admission Requirements

Applicants to the Master of Conservation Leadership will have a minimum average of at least 77% (B+) in the last completed degree and at least three years working experience in the field of conservation post honours bachelor’s degree. Preference will be given to applicants with some experience in leadership or management roles. Applicants must submit a statement of interest. A letter of recommendation from a current employer or a conservation professional emphasizing the applicant’s leadership potential is also required. Students are admitted in the Summer. Alternate admission may be offered to applicants with some experience in leadership or management roles. Applicants must submit a statement of interest. A letter of recommendation from a current employer or a conservation professional emphasizing the applicant’s leadership potential is also required. Applicants are admitted in the Summer. Alternate admission may be offered to applicants who do not meet the admission requirements but have completed more than 5 years of relevant work experience. The Program office should be consulted for further admission information and deadlines.

Program Requirements

The Master of Conservation Leadership is comprised of 4.0 credits organized into four units: Foundations, Leadership and Communication, Innovation in Conservation, and Addressing a Conservation or Organizational Challenge. Each unit is comprised of a residency component and online modules, with the exception of Unit 4, which is dedicated to the final learning portfolio.

Year 1

Unit 1: Foundations

Residency 1: Program Orientation, IT Orientation, Collaborative Learning, Ethical Space, Individual Development Plans

CONS*6000 [0.50] Indigenous Knowledge Systems and Governance Models

CONS*6100 [0.50] Conservation Past, Present and Possible

CONS*6010 [0.25] Conservation Biology for Professionals

Residency 2: Lectures and Assessment Activities, Leadership Self-Assessment; Discussions of Leadership in Conservation

CONS*6050 [0.25] Partnerships for Conservation

Unit 2: Leadership and Communication

CONS*6060 [0.50] Indigenous Knowledge Systems and Governance Models

MGMT*6200 [0.50] Leadership Assessment and Development

CONS*6020 [0.25] Public Communication for Conservation

Year 2

Unit 3: Innovation in Conservation

Residency 3: Lectures, Workshops, Assessment Activities, Innovation in Conservation Field Trips

CONS*6030 [0.25] Conservation Tools and Technology

CONS*6040 [0.50] Conservation in Working and Private Landscapes

Unit 4: Addressing a Conservation or Organization Challenge

CONS*6300 [1.00] Final Learning Portfolio

Courses

CONS*6000 Indigenous Knowledge Systems and Governance Models S-F [0.50]
Through face-to-face land based learning and lectures from Indigenous knowledge holders and scholars, students are introduced to the different components of knowledge systems, investigate how western knowledge systems have engaged with Indigenous knowledge, and explore conservation models rooted in Indigenous knowledge and governance.

OFFERING(S): Offered through Distance Education format only.

RESTRICION(S): Restricted to students in the Master of Conservation Leadership program.

DEPARTMENT(S): Department of Geography

CONS*6010 Conservation Biology for Professionals F [0.25]
This course provides an overview of conservation biology in the Anthropocene with an emphasis on peer-reviewed journals and data sets. Through increased comprehension of contemporary conservation challenges, students build leadership capacity for decision-making in the context of uncertainty and complexity.

OFFERING(S): Offered through Distance Education format only.

RESTRICION(S): Restricted to students in the Master of Conservation Leadership program.

DEPARTMENT(S): Department of Geography

CONS*6020 Public Communication for Conservation W-S [0.25]

EXCHANGES OF MASS, MOMENTUM AND ENERGY BETWEEN THE SURFACE AND THE ATMOSPHERE WILL BE STUDIED IN THE CONTEXT OF LARGE-SCALE METEOROLOGY. DYNAMICS AND TURBULENCE IN AND ABOVE PLANT CANOPIES WILL BE EXAMINED FROM THEORETICAL AND PRACTICAL PERSPECTIVES. TOPICS INCLUDE TIME-SERIES ANALYSIS, MICROMETEOROLOGICAL MEASUREMENT THEORY, AND BASIC PRINCIPLES OF ATMOSPHERIC SCIENCE.

OFFERING(S): Offered through Distance Education format only.

RESTRICION(S): Restricted to students in the Master of Conservation Leadership program.

DEPARTMENT(S): Department of Geography

CONS*6030 Conservation Tools and Technology S [0.25]

This course provides a critical review of classic and emerging tools for conservation planning and governance, such as: GIS modelling for landscape assessment and planning; participatory GIS; modelling; social science tools; cost effectiveness analysis; cost-benefit analysis; drones; DNA barcoding; and non-intrusive monitoring.

RESTRICION(S): Restricted to students in the Master of Conservation Leadership program.

DEPARTMENT(S): Department of Geography

CONS*6040 Conservation in Working and Private Landscapes S [0.50]

This course examines both regulatory and non-regulatory measures for advancing conservation outcomes in intensively impacted and managed landscapes including agricultural, forested, and urban areas.

OFFERING(S): Offered through Distance Education format only.

RESTRICION(S): Restricted to students in the Master of Conservation Leadership program.

DEPARTMENT(S): Department of Geography

CONS*6050 Partnerships for Conservation F-W [0.25]

This course builds leadership skills in the assessment, development, and maintenance of effective conservation partnerships that span Crown and Indigenous governments, the private sector, and civil society.

OFFERING(S): Offered through Distance Education format only.

RESTRICION(S): Restricted to students in the Master of Conservation Leadership program.

DEPARTMENT(S): Department of Geography

2020-2021 Graduate Calendar
January 28, 2020
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONS*6100</td>
<td>Conservation Past, Present and Possible S [0.50]</td>
<td></td>
<td>The soil as a physical system with special regard to soil water movement and the diffusion and dispersion of chemical substances. Numerical techniques and computer solutions will be developed.</td>
</tr>
<tr>
<td></td>
<td>Offering(s):</td>
<td>Offered through Distance Education format only.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Restriction(s):</td>
<td>Restricted to students in the Master of Conservation Leadership program.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Department(s):</td>
<td>Department of Geography</td>
<td></td>
</tr>
<tr>
<td>CONS*6300</td>
<td>Final Learning Portfolio F-W [1.00]</td>
<td></td>
<td>The Final Learning Portfolio (FLP) is the capstone experience where students plan, organize, and execute a project that demonstrates leadership and advances knowledge or practice to address a conservation or organizational challenge.</td>
</tr>
<tr>
<td></td>
<td>Prerequisite(s):</td>
<td>CONS<em>6000, CONS</em>6010, CONS<em>6020, CONS</em>6030, CONS<em>6040, CONS</em>6050, CONS<em>6100, and MGMT</em>6200.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Restriction(s):</td>
<td>Restricted to students in the Master of Conservation Leadership program.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Department(s):</td>
<td>Department of Geography</td>
<td></td>
</tr>
</tbody>
</table>

**Required Management courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGMT*6200</td>
<td>[0.50]</td>
<td>Leadership Assessment and Development</td>
</tr>
</tbody>
</table>