

# 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:

<b>Date</b>	<b>Description</b>
May 25, 2020	Initial Publication
June 3, 2020	Revision 1

The logo for the University of Guelph, featuring the text "UNIVERSITY of GUELPH" in a stylized font.The tagline "CHANGING LIVES IMPROVING LIFE" in a bold, sans-serif font, set against a yellow background.

# 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](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/>

### **Statistics Canada - Notification of Disclosure**

---

For further information, please see Statistics Canada's web site at <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>.

# 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

---

<b>Neuroscience .....</b>	<b>136</b>
Administrative Staff .....	136
Graduate Faculty .....	136
Associated Graduate Faculty .....	136
MSc/MBS Collaborative Specialization .....	136
PhD Collaborative Specialization .....	136
Courses .....	137

## Neuroscience

The Neuroscience collaborative specialization provides an opportunity for MSc/MBS/PhD students engaged in research in the rapidly expanding field of neuroscience, to combine their departmental degree program with multidisciplinary exposure to the field of neuroscience. This unique combination of multidisciplinary studies provides students with the best possible foundation for academic careers in neuroscience and related areas. The collaborative specialization includes participation from core faculty in the following departments: Animal Biosciences, Biomedical Sciences, Clinical Studies, Human Health and Nutritional Sciences, Integrative Biology, Molecular and Cellular Biology, Pathobiology, Population Medicine and Psychology. Students wishing to pursue a Master's or PhD degree with the designation Neuroscience must enter the collaborative specialization in Neuroscience through a participating department.

### Administrative Staff

#### Boyer Winters

Director (3005 MacKinnon, Ext. 52163)  
bwinters@uoguelph.ca

#### Mark Fenske

Graduate Program Coordinator (3020 MacKinnon Extension, Ext. 56411)  
mfenske@uoguelph.ca

#### Robin Sorbara

Graduate Program Assistant (4014 MacKinnon, Ext. 53508)  
robinfra@uoguelph.ca

### Graduate Faculty

#### Naseem Al-Aidroos

Associate Professor, Psychology

#### Craig D. Bailey

Assistant Professor, Biomedical Sciences

#### Andrew J. Bendall

Associate Professor, Molecular and Cellular Biology

#### Leah R. Bent

Associate Professor, Human Health and Nutritional Sciences

#### Nicholas J. Bernier

Professor, Integrative Biology

#### Elena Choleris

Professor, Psychology

#### Donald Dedrick

Associate Professor, Philosophy/Psychology

#### Mark J. Fenske

Associate Professor, Psychology

#### Christopher Fiacconi

Assistant Professor, Psychology

#### George Harauz

Professor and Canada Research Chair, Molecular and Cellular Biology

#### Andreas Heyland

Assistant Professor, Integrative Biology

#### Fiona James

Assistant Professor, Clinical Studies

#### Nina Jones

Associate Professor and Canada Research Chair, Molecular and Cellular Biology

#### Bettina E. Kalisch

Associate Professor, Biomedical Sciences

#### Jibran Khokhar

Assistant Professor, Biomedical Sciences

#### Frederic Laberge

Assistant Professor, Integrative Biology

#### Jasmin Lalonde

Assistant Professor, Molecular and Cellular Biology

#### Francesco Leri

Professor, Psychology

#### Ray Lu

Associate Professor, Molecular and Cellular Biology

#### David W.L. Ma

Associate Professor, Human Health and Nutritional Sciences

#### Neil J. MacLusky

Professor and Chair, Biomedical Sciences

#### Georgia Mason

Professor and Canada Research Chair, Animal Biosciences

#### Robert L. McLaughlin

Associate Professor, Integrative Biology

#### Daniel V. Meegan

Associate Professor, Psychology

#### Jennifer Murray

Assistant Professor, Psychology

#### Lee Niel

Assistant Professor, Population Medicine

#### Linda A. Parker

Professor and Canada Research Chair, Psychology

#### John Z. Srbley

Assistant Professor, Human Health and Nutritional Sciences

#### Lana M. Trick

Professor, Psychology

#### Lori A. Vallis

Associate Professor, Human Health and Nutritional Sciences

#### Terry Van Raay

Assistant Professor, Molecular and Cellular Biology

#### Tina Widowski

Professor, Animal Biosciences

#### Boyer D. Winters

Associate Professor, Psychology

#### John L. Zettel

Assistant Professor, Human Health and Nutritional Sciences

As a practical matter, any faculty member who is approved by the Board of Graduate Studies for graduate faculty status and is a member of a participating unit within the collaborative specialization will be able to advise a master's or doctoral student.

### Associated Graduate Faculty

#### Geoffrey Power

Contractually Limited Faculty, Human Health and Nutritional Sciences

### MSc/MBS Collaborative Specialization

The MSc/MBS collaborative specialization in Neuroscience enables students engaged in neuroscience research to combine their departmental degree program with a multidisciplinary specialization in the field of neuroscience.

#### Admission Requirements

MSc/MBS students in the collaborative specialization in Neuroscience must meet the admission requirements of the participating department in which they are enrolled. The application process has two stages: first, application to the primary program of interest, identifying interest in the collaborative specialization as a secondary focus. If the student is admitted to the primary program, the second stage is then admission to the collaborative specialization.

#### Program Requirements

In addition to coursework in their respective departments, students in the MSc/MBS collaborative specialization must complete NEUR\*6000 as well as registering for NEUR\*6100 each term that they are in the collaborative specialization. In NEUR\*6100, students and faculty will meet once a month to discuss issues/ hear talks/ present research in neuroscience.

### PhD Collaborative Specialization

The PhD collaborative specialization in Neuroscience enables students engaged in neuroscience dissertation research to combine their departmental degree program with a multidisciplinary specialization in the field of neuroscience.

#### Admission Requirements

PhD students in the collaborative specialization in Neuroscience must meet the PhD admission requirements for the participating department in which they are enrolled.

#### Program Requirements

If a student enters the PhD collaborative specialization in Neuroscience at the doctoral level, in addition, to coursework in their respective departments, students must complete NEUR\*6000, or show evidence of course equivalence in prior training. Students must be engaged in neuroscience dissertation research. During each term of their program of studies, doctoral students must enroll in NEUR\*6100. The seminar will meet monthly. Students must take their qualifying exams within five semesters of entering the program, as required by University graduate policies. One member on the qualifying exam committee must be a core member of the collaborative specialization in Neuroscience outside the student's home department or a faculty member from another university approved by graduate studies. As well one member of the student's advisory committee must be a core member of the neuroscience collaborative specialization outside the student's home department or a faculty member from another university approved by graduate studies.

**Courses****NEUR\*6000 Principles of Neuroscience U [0.50]**

This course is designed to ensure that graduate students with diverse neuroscience backgrounds registered in the collaborative specialization in Neuroscience are exposed to the fundamentals in all areas of neuroscience.

*Department(s):* Department of Biomedical Sciences

**NEUR\*6100 Seminar in Neuroscience U [0.00]**

This course will expose graduate students to some of the major theories, issues and methodologies driving research in neuroscience. Students will learn to critically evaluate presentations by researchers in this field as well as to communicate the results of their own research.

*Department(s):* Department of Psychology