

ONE HEALTH

The Collaborative Specialization in One Health prepares future leaders for the complex challenges at the confluence of human, animal, and environmental health, working across disciplinary boundaries, conducting multidisciplinary research, mobilizing knowledge, and informing policy. Doctoral and Master's (thesis or course work and MRP) students wishing to undertake graduate studies with emphasis on One Health will be admitted by a participating department and will register in both the participating department and in the collaborative specialization.

The participating academic programs are Animal Biosciences (MSc, PhD), Biomedical Sciences (MSc, PhD), Clinical Studies (MSc), Computational Sciences (PhD), Computer Science (MSc, PhD), Family Relations and Applied Nutrition (MSc in AHN & FRHD only, PhD), Engineering (MEng, MAsc, PhD), Environmental Sciences (MES, MSc, PhD), Food Science (MSc, PhD), Geography (MA, MSc, PhD), History (MA, PhD), Human Health and Nutritional Sciences (MSc, PhD), Integrative Biology (MSc, PhD), Mathematics and Statistics (MSc, PhD), Molecular and Cellular Biology (MSc, PhD), Pathobiology (MSc, PhD), Political Science (MA, PhD), Population Medicine (MSc, PhD), Philosophy (MA, PhD), Public Issues Anthropology (MA), and Rural Development and Planning (MSc).

Administrative Staff

Graduate Program Coordinator

Katie Clow (2531 Stewart Building, Ext. 53944)
kclow@uoguelph.ca

Graduate Faculty

This list may include Regular Graduate Faculty, Associated Graduate Faculty and/or Graduate Faculty from other universities.

Tara H. Abraham

B.Sc. McMaster, MA, PhD Toronto - Associate Professor
Graduate Faculty

Madhur Anand

B.Sc., PhD Western Ontario - Professor
Graduate Faculty

Olaf Berke

B.Sc., M.Sc. PhD Dortmund (Germany) - Associate Professor
Graduate Faculty

Theresa M. Bernardo

Assoc. of Music, DVM Guelph, M.Sc. Prince Edward Island - Professor
Graduate Faculty

Andrea Breen

B.Ed. McGill, Ed.M. Harvard, PhD Toronto - Associate Professor
Graduate Faculty

Ryan C. Briggs

BSS Ottawa, PhD American - Associate Professor
Graduate Faculty

David A. Calvert

BA, M.Sc. Guelph, PhD Waterloo - Associate Professor
Graduate Faculty

Catherine Carstairs

AB Harvard, Dip Ed McGill, MA, PhD Toronto - Professor

Graduate Faculty

Katie M. Clow

B.Sc., DVM, PhD Guelph - Assistant Professor
Graduate Faculty

Sherri Cox

DVM, MBA, PhD Guelph - Contractually Limited Appointment
Associated Graduate Faculty

Rozita Dara

B.Sc. Shahid Teheshti, M.Sc. Guelph, PhD Waterloo - Associate Professor
Graduate Faculty

Kari Dunfield

B.Sc. Calgary, M.Sc., PhD Saskatchewan - Professor
Graduate Faculty

Elizabeth Finnis

BA McMaster, MA Western, PhD McMaster - Associate Professor
Graduate Faculty

Robert M. Friendship

DVM, M.Sc. Guelph, Dipl. ABVP - Professor
Graduate Faculty

Karine Gagné

BA Concordia, M.Sc., PhD Montreal - Associate Professor
Graduate Faculty

Dan Gillis

B.Sc., M.Sc., PhD Guelph - Associate Professor
Graduate Faculty

Maya Goldenberg

BA Toronto, MA McGill, PhD Michigan State - Professor
Graduate Faculty

Lawrence Goodridge

B.Sc., M.Sc., PhD Guelph - Professor
Graduate Faculty

Lauren Grant

B.Sc., M.Sc. McMaster, PhD Guelph - Assistant Professor
Graduate Faculty

Amy L. Greer

B.Sc., Mount Allison, M.Sc., Trent, PhD Arizona State - Associate Professor
Graduate Faculty

T. Ryan Gregory

B.Sc. McMaster, PhD Guelph - Professor
Graduate Faculty

Andrew Hamilton-Wright

B.Sc., M.Sc. Guelph, PhD Waterloo - Associate Professor
Graduate Faculty

Carmen Ho

BA Western, M.Sc. London, PhD Toronto - Assistant Professor
Graduate Faculty

Claire Jardine

B.Sc. Guelph, M.Sc. British Columbia, DVM, PhD Saskatchewan - Associate Professor

Graduate Faculty

Candace Johnson

BA Toronto, MA, PhD Dalhousie - Professor
Graduate Faculty

Craig A. Johnson

BA Queen's, MA Toronto, PhD School of Economics London - Professor
Graduate Faculty

Iris Joye

B.Sc., M.Sc. Leuven, PhD Leuven/Ghent (Belgium) - Associate Professor
Graduate Faculty

Niel A. Karrow

B.Sc. Guelph, M.Sc., PhD Waterloo - Professor
Graduate Faculty

Satsuki Kawano

BA Keio, MA Minnesota, PhD Pittsburgh - Professor
Graduate Faculty

David F. Kelton

DVM, M.Sc., PhD Guelph - Retired Faculty, Population Medicine, University of Guelph
Associated Graduate Faculty

Edward Koning

BA, MA Leiden, PhD Queen's - Associate Professor
Graduate Faculty

Gisele LaPointe

B.Sc., PEI, M.Sc., PhD Quebec - Professor
Graduate Faculty

Leah Levac

BA Acadia, MA, PhD New Brunswick - Associate Professor
Graduate Faculty

Phil Loring

BA Florida, MA, PhD Alaska - Associate Professor
Graduate Faculty

Brittany Luby

BA Queen's, MA, PhD York - Associate Professor
Graduate Faculty

Stuart G. McCook

BA Toronto, MS Rensselaer PI, MA, PhD Princeton - Professor
Graduate Faculty

Thomas (Tad) McIlwraith

BA Toronto, MA British Columbia, PhD New Mexico - Associate Professor
Graduate Faculty

Faisal Moola

B.Sc. Toronto, M.Sc. Lakehead, PhD Dalhousie - Associate Professor
Graduate Faculty

Kate Parizeau

B.A.Sc. McMaster, M.Sc., PhD Toronto - Associate Professor
Graduate Faculty

Jane Parmley

DVM Saskatchewan, PhD Guelph - Associate Professor

Graduate Faculty

David L. Pearl

B.Sc. McGill, M.Sc. York, DVM, PhD Guelph - Associate Professor
Graduate Faculty

Silvia Sarapura

B.Sc. Central Peru, M.Sc., PhD Guelph - Assistant Professor
Graduate Faculty

Kelsey Spence

B.Sc. Trent, PhD Guelph - Assistant Professor
Graduate Faculty

John Z. Srbely

B.Sc. Laurentian, DC Canadian Memorial Chiropractic College, PhD Guelph - Associate Professor
Graduate Faculty

Travis Steffens

B.Sc., MA Calgary, PhD Toronto - Assistant Professor
Graduate Faculty

Deborah Stienstra

BA Alberta, MA, PhD York - Professor
Graduate Faculty

Leonardo Susta

DVM Perugia, PhD Georgia, Dipl. ACVP - Assistant Professor
Graduate Faculty

Eran Ukwatta

B.Sc. Moratuwa, MES, PhD Western, P.Eng. - Associate Professor
Graduate Faculty

Laura Van Eerd

M.Sc., PhD Guelph - Professor
Graduate Faculty

Keith Warriner

B.Sc. Nottingham, PhD Aberystwyth - Professor
Graduate Faculty

Quinn Webber

B.Sc., PhD Winnipeg, PhD Memorial - Assistant Professor
Graduate Faculty

Jeffrey Wichtel

B.V.Sc., PhD Massey - Professor and Dean, Ontario Veterinary College
Graduate Faculty

Geoffrey A. Wood

DVM Guelph, PhD Toronto, D.V.Sc. Guelph - Associate Professor
Graduate Faculty

Admission Requirements

Master's and doctoral students in the Collaborative Specialization in One Health must meet the admission requirements of the participating department in which they are enrolled. The application process has two stages. First, prospective students will apply to their primary program of interest, identifying interest in the collaborative specialization as a focus. They must include a signed Declaration of Commitment Form for the collaborative specialization with their application. If the student is admitted to the primary program, the second stage is then admission to the collaborative specialization. Applications are forwarded

to the specialization's Graduate Program Coordinator and preliminary acceptance is granted to all qualified candidates.

Upon acceptance, all enrolled students will be required to submit a letter of intent briefly outlining their interest in One Health and explaining how their area of research will apply a One Health approach. This is due November 1 of their first year of study and will be reviewed by the specialization's Graduate Program Coordinator and a committee of 3-5 faculty from different colleges. This letter must be deemed satisfactory for the student to be eligible to continue in the program.

Learning Outcomes

By the end of their program of study, graduates of the Collaborative Specialization in One Health should be able to:

1. **Holistic Understanding of Health**
 - a. Formulate a holistic definition of health in the context of their work.
 - b. Analyze the interconnections between animal, human, and environmental health.
 - c. Apply and assess health in different settings, and work in different levels of health from local to global.
2. **Systems Thinking**
 - a. Illustrate complex health issues as systems by identifying the components, their functions, and the interconnections between them.
3. **Problem Solving and Critical Thinking**
 - a. Analyze problems in a holistic manner, incorporating various perspectives, disciplinary and non-traditional knowledges.
 - b. Devise potential solutions that acknowledge the interconnections of human, animal and environmental health.
 - c. Identify how behaviour changes and what makes for successful intervention.
4. **Resilience and Health**
 - a. Evaluate system resilience and sustainability by selecting, combining, and applying tools and methods from different disciplines.
5. **Leadership and Collaboration**
 - a. Apply strong networking and interpersonal skills in professional settings.
 - b. Identify relevant perspectives involved in each system and assemble teams that bring together the necessary perspectives and expertise.
 - c. Generate action plans that leverage the strengths of the team and promote efficiency.
6. **Informatics**
 - a. Synthesize and analyze data and literature from a variety of sources to make informed, evidence-based decisions, including policy assessment and recommendations.
 - b. Explain complex One Health problems using several modes of communication and knowledge dissemination tools.
7. **Research**
 - a. Apply contemporary research methods, skills and techniques to conduct independent inquiry within One Health.
 - b. Appraise current One Health research using theory and peer-reviewed standards.
 - c. Expand current knowledge through their research that contributes to One Health efforts.
8. **Professional and Ethical Behaviour**
 - a. Create opportunities for open communication and active listening.
 - b. Demonstrate ethical decision-making when evaluating proposed One Health actions.
 - c. Demonstrate strong time management and organizational skills.

9. Breadth and Depth of Understanding

- a. Demonstrate a depth of knowledge of their primary area of specialization and recognize how tools and methods from their discipline contributes to One Health
- b. Describe the applications of and methodologies for One Health in variety of contexts

Program Requirements

Master's Requirements

Master's students in the Collaborative Specialization in One Health must complete:

Code	Title	Credits
ONEH*6000	One Health Approaches to Research	0.50
ONEH*6100	Master's Seminar in One Health	0.50

An acceptable MRP or thesis that applies a One Health approach.

For thesis-based master's students, at least one member of the student's advisory committee must be a core graduate faculty member of the Collaborative Specialization in One Health. Requirements of this collaborative specialization may also serve as elective requirements in the student's home program.

Doctoral Requirements

Doctoral students in the Collaborative Specialization in One Health must complete:

Code	Title	Credits
ONEH*6000	One Health Approaches to Research	0.50
ONEH*6200	Doctoral Seminar in One Health	0.50

Successfully defend a thesis that applies a One Health approach.

At least one member of the student's advisory committee must be a core graduate faculty member of the Collaborative Specialization in One Health. Students that previously completed ONEH*6000 One Health Approaches to Research as part of the master's collaborative specialization will be exempt from retaking it as part of the doctoral collaborative specialization; however, they will still be required to complete the final Research Proposal and Presentation assignment. Requirements of this collaborative specialization may also serve as elective requirements in the student's home program.

Courses

ONEH*6000 One Health Approaches to Research Winter Only [0.50]

A multidisciplinary course for graduate students that provides in-depth knowledge on the One Health approach, exploring complex issues at the interface of human, animal, and environmental health. Active learning lessons will foster strong skill development for One Health research in collaboration, systems thinking, transdisciplinarity, critical thinking, problem solving, leadership, and communication.

Restriction(s): Restricted to One Health collaborative specialization students.

Department(s): Department of Population Medicine

Location(s): Guelph

ONEH*6100 Master's Seminar in One Health Fall Only [0.50]

This course offers a university-wide multidisciplinary forum for discussion of One Health. Master's students will discover One Health through different disciplinary lenses, facilitate and actively engage in academic discussion about One Health, and practice leadership and networking skills necessary for success as a One Health practitioner.

Prerequisite(s): ONEH*6000

Restriction(s): Restricted to One Health collaborative specialization masters students.

Department(s): Department of Population Medicine

Location(s): Guelph

ONEH*6200 Doctoral Seminar in One Health Fall Only [0.50]

This course offers a university-wide multidisciplinary forum for discussion of One Health. Doctoral students will discover One Health through different disciplinary lenses, facilitate and actively engage in academic discussion about One Health, and practice leadership and networking skills necessary for success as a One Health practitioner.

Prerequisite(s): ONEH*6000

Restriction(s): Restricted to One Health collaborative specialization PhD students.

Department(s): Department of Population Medicine

Location(s): Guelph