# 2009-2010 Graduate Calendar

The information published in this Graduate Calendar outlines the rules, regulations, curricula, programs and fees for the 2009-2010 academic years, including the Fall Semester 2009, the Winter Semester 2010 and the Summer Semester 2010.

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:

• The Association of Universities and Colleges of Canada

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# **Disclaimer**

The Office of Graduate Program Services has attempted to ensure the accuracy of this on-line Graduate Calendar. However, the publication of information in this document does not bind the university to the provision of courses, programs, schedules of studies, fees, or facilities as listed herein.

# Limitations

The University of Guelph reserves the right to change without notice any information contained in this calendar, including any rule or regulation pertaining to the standards for admission to, the requirements for the continuation of study in, and the requirements for the granting of degrees or diplomas in any or all of its programs.

The university will not be liable for any interruption in, or cancellation of, any academic activities as set forth in this calendar and related information where such interruption is caused by fire, strike, lock-out, inability to procure materials or trades, restrictive laws or governmental regulations, actions taken by the faculty, staff or students of the university or by others, civil unrest or disobedience, Public Health Emergencies, or any other cause of any kind beyond the reasonable control of the university.

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 Training, Colleges and Universities, 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 http://www.uoguelph.ca/registrar/registrar/rindex.cfm?index.

# **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 Graduate Program 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, his/her 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 his or her 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 http://www.uoguelph.ca/policies.

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# **Population Medicine**

The Department of Population Medicine is an international leader in promoting the optimal health and productivity of animal populations, ensuring the safety of foods of animal origin and preventing animal-related disease in humans.

Our research mission is to discover and disseminate knowledge regarding the management of health and productivity of animal populations, and the interrelationships of animals with humans and the environment. In support of this mission we rely principally on our expertise in field-based quantitative observational studies and clinical trials.

Our teaching/learning mission is to guide students as they obtain an essential knowledge base and develop the necessary communicative, quantitative and problem-solving skills to integrate and apply this knowledge; and to instill the appropriate attitudes and abilities required for life-long learning.

The department offers programs leading to MSc, Master's in Public Health (MPH), PhD and DVSc degrees.

#### **Administrative Staff**

#### Chair

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Kenneth G. Bateman

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Dipl. Statistics, PhD Dortmund Germany - Assistant Professor

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DVM, DVSc Guelph, Dip ACT - Assistant Professor

Jason Coe

DVM, PhD Guelph - Assistant Professor

Catherine E. Dewey

DVM, MSc, PhD Guelph - Professor and Chair

Todd F. Duffield

DVM, DVSc Guelph - Associate Professor

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DVM, MSc Guelph, Dip ABVP - Professor

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DVM, MSc, PhD Guelph - Assistant Professor

**Andria Jones** 

DVM, PhD Guelph - Assistant Professor

David F. Kelton

DVM, MSc, PhD Guelph, Dip ABVP - Professor

Stephen LeBlanc

BSc, McGill, DVM, DVSc Guelph - Associate Professor

Kenneth E. Leslie

DVM, MSc Guelph - Professor

Kerry D. Lissemore

BSc Toronto, DVM, DVSc Guelph - Associate Professor and Associate Dean - Academic

Scott A. McEwen

DVM, DVSc Guelph, Dip. ACVP - Professor and Graduate Co-ordinator

Paula I. Menzies

DVM Guelph, MPVM California - Associate Professor

**David Pearl** 

BSc McGill, MSc York, DVM, PhD Guelph - Assistant Professor

Peter W. Physick-Sheard

BVSc Bristol, Dip Vet Surg, MSc Guelph, FRCVS (UK) - Associate Professor

Zvonimir Poljak

DVM Croatia, MSc, PhD Guelph - Assistant Professor

Jan Sargeant

DVM, MSc, PhD Guelph - Professor and Director - Centre for Public Health and Zoonoses

**David Waltner-Toews** 

BA Goshen College (Indiana), DVM Saskatchewan, PhD Guelph - Professor

# **MSc Program**

The department offers research-based MSc programs in epidemiology, theriogenology, health management and a course work-based MSc program in epidemiology.

#### Admission Requirements

When reviewing transcripts, the department focuses on the applicant's performance in undergraduate and graduate-level courses relevant to the applicant's proposed area of specialization. Students admitted must have an honours or DVM degree (or its equivalent). In addition, the department considers the applicant's special circumstances and the referees' comments. Since the core of the course work MSc program builds on analytic skills, students entering the program should possess knowledge of basic statistical methods and their application.

All applicants should submit a one-page statement of research interests and career goals to assist in the identification of a faculty advisor who has the funding necessary to support the research. Students may be admitted into the fall, winter or summer semesters.

#### **Degree Requirements**

MSc by Thesis

The prescribed studies for our research-based MSc are a minimum of four courses (at least 2.0 course credits) appropriate to the discipline. Epidemiology I (POPM\*6200) is a required course for students in epidemiology; students in health management and theriogenology must take either Epidemiology I (POPM\*6200) or Applied Clinical Research (POPM\*6230). A minimum of 'B-' average is required in the prescribed studies. The department seminar course, POPM\*6100, is also required but does not count as one of the four courses. A thesis must be completed and successfully defended.

MSc in Epidemiology by Courses

For the MSc in Epidemiology by course work and project, no fewer than eight courses (at least 4.0 course credits) will be taken. These must be approved by the departmental graduate studies committee and the dean of Graduate Studies. Each student in the program will take three prescribed courses (including the Project in Epidemiology course, POPM\*6250, which is equivalent to two courses), and at least four additional courses. The department seminar course, POPM\*6100, is also required but does not count as one of the eight courses. Normally, the prescribed courses for the MSc in Epidemiology by course work will include:

#### **Prescribed Courses:**

POPM*6200	[0.50]	Epidemiology I
POPM*6210	[0.50]	Epidemiology II
POPM*6250	[1.00]	Project in Epidemiology

# **Additional Courses**

The four courses selected in this category will depend upon the student's background, specialty, interest and area of research.

Examples of courses suitable for inclusion in the student's program include:

Examples of cours	es suitable	for inclusion in the student's program include.
PABI*6550	[0.50]	Epidemiology of Zoonoses
POPM*6230	[0.50]	Applied Clinical Research
POPM*6290	[0.50]	Statistics for the Health Sciences
POPM*6350	[0.50]	Safety of Foods of Animal Origins
POPM*6950	[0.50]	Studies in Population Medicine
STAT*6920	[0.50]	Topics in Statistics
STAT*3510		Environmental Risk Assessment (W)
POPM*6700	[0.50]	Swine Health Management *
POPM*6400	[0.50]	Dairy Health Management *
STAT*6960	[0.50]	Design of Experiments and Data Analysis for the Life
		Sciences

Additional courses other than those listed above may be deemed suitable for the student's program by the Departmental Graduate Coordinator after recommendations are received from the Advisory Committee.

At least three semesters of full-time study will be required for completion of the course work MSc program; two of these semesters must be at the University of Guelph. Normally, however, students take 4-5 semesters to complete the program.

## **PhD Program**

# **Admission Requirements**

A PhD program is available in epidemiology. Admission into this program is usually granted to holders of an MSc degree who have demonstrated superior performance, or to MSc students who have not completed their thesis but have performed exceptionally well in courses, shown exceptional aptitude and skill in research, and whose thesis research is suitable for expansion to the doctoral level. For direct transfer, a thesis proposal and strongly supportive letters of reference are required. Infrequently, well qualified DVM or honours degree holders may be accepted directly into the PhD program.

All applicants should submit a one-page statement of research interests and career goals to assist in the identification of a faculty advisor who has the funding necessary to support the thesis research. Students may be admitted into the fall, winter or summer semesters.

# **Degree Requirements**

The major emphasis in the PhD program is on the preparation of an acceptable thesis. There are no specific course requirements other than the Seminar, POPM\*6100, which must be completed twice. However, students are expected to have taken POPM\*6200 Epidemiology I (F) and POPM\*6210 Epidemiology II, or their equivalent, in their MSc program. It is usual for students, in consultation with their advisory committee, to select a suitable program of prescribed studies and additional courses. Course selection takes into account the student's background, research area, career aspirations, and need to prepare for the qualifying examination.

Courses should normally be completed before the qualifying exam is attempted. The written component of the examination is followed by an oral component (two to four hours), usually one week later. MSc holders must complete the qualifying examination by the end of the fifth semester. Students transferring from the MSc program and those who enter the program directly after their honours or DVM degrees (or their equivalents) must complete the examination by the end of the seventh semester. In addition, the advisory committee is required to confirm that the student has demonstrated ability and promise in research. The PhD program is completed by the successful defence of a thesis.

# **DVSc Program**

The Department of Population Medicine participates in the DVSc program with recognized fields in health management and theriogenology. The normal basis for admission to DVSc studies as a regular or a provisional student is a DVM or equivalent degree which would allow the applicant to be eligible for licence to practice veterinary medicine in Ontario. The applicant must have achieved high academic standing as set out in the Admission Requirements in the DVSc program

#### **Health Management**

Candidates must have a DVM or equivalent degree, appropriate clinical experience, cumulative average of at least second-class honours ("B" standing), and be licensed or eligible for licensing to practice veterinary medicine in Ontario. One position in ruminant health management and one position in swine health management are available during most academic years, and they normally start in May or September. It is a three-year program, which will provide training and experience in applied health management and clinical research. Approximately one-third of the time will involve clinical training, teaching final year veterinary students and service duties (including on-call), one-third course work and one-third research. Service duties in ruminant health management are with the Ruminant Field Service clinic of the Veterinary Teaching Hospital. In swine health management, clinical experience and advanced academic activities will be appropriate for a candidate preparing for board certification in Swine Health Management by the American Board of Veterinary Practitioners. The candidate will be required to complete a substantive thesis research project, related to an applied aspect of production medicine. The DVSc degree requirements include successful completion of 2.5 credits of prescribed graduate level courses, a qualifying examination in the student's discipline area, and a successful defence of a thesis. A faculty member(s) in the Department of Population Medicine will supervise each candidate for the Health Management DVSc position.

#### Theriogenology

The Department of Population Medicine offers the Doctor of Veterinary Science (DVSc) degree in the field of Theriogenology. Prerequisites include a DVM or equivalent degree, one or two years of practice experience/internship, cumulative average of at least second-class honours ("B" standing), and eligibility for licensure to practice veterinary medicine in Ontario. The DVSc program provides rigorous advanced academic preparation in the discipline of Theriogenology with a view to preparation for Board Certification by the American College of Theriogenologists. The Theriogenology field at the Ontario Veterinary College is multi-species, with emphasis placed on a candidate's specific areas of interest. The DVSc differs from PhD training by emphasizing the development of both research and applied clinical skills. It is a three-year program, with approximately one-third of the time involving clinical duties within the Veterinary Teaching Hospital, including assisting in teaching of final year veterinary students. The remainder of effort is directed towards a substantive thesis research project in Theriogenology and coursework. The DVSc degree requirements include successful completion of 2.5 credits of prescribed graduate level courses, a qualifying examination and successful defense of a thesis. A faculty member(s) in the Department of Population Medicine will supervise each candidate for the Theriogenology DVSc position.

#### **Interdepartmental Programs**

# Food Safety and Quality Assurance MSc Collaborative Program

The Department of Population Medicine participates in the MSc program in food safety and quality assurance. Those faculty members whose research and teaching expertise includes aspects of food safety and quality assurance may serve as advisors for MSc students. Please consult the Food Safety and Quality Assurance listing for a detailed description of the MSc collaborative program.

#### **International Studies Collaborative MSc Program**

The Department of Population Medicine participates in the International Development Studies MSc program. Those faculty members whose research and teaching expertise includes aspects of international studies may serve as advisors for MSc in International

Development Studies students. Please consult the International Development Studies listing for a detailed description of the interdepartmental program.

#### Courses

\*Given in alternate years.

#### **Epidemiology**

# POPM\*6200 Epidemiology I F [0.50]

This course covers concepts, principles and methods of basic and applied epidemiology, including the following topics: sampling, measuring disease frequency, clinical epidemiology, descriptive epidemiology, causal reasoning and design, interpretation and critical appraisal of surveys, observational studies, field trials and critical appraisal.

#### POPM\*6210 Epidemiology II W [0.50]

Advanced study design and analytic methods for the analysis of data from observational studies and surveys.

# POPM\*6220 Analytical Epidemiology S [0.50]

This course focuses on the advanced analysis of epidemiologic studies. Case control, cohort and survival studies are analysed within the generalized linear-model framework. Links between study objectives, study design and data analysis will be emphasized throughout. Special problems, such as the analysis of correlated data arising from cluster sampling of individuals, are discussed.

Prerequisite(s): POPM\*6210 and POPM\*6290

# POPM\*6230 Applied Clinical Research F [0.50]

This course is designed to help clinical researchers design, fund, and analyze their clinical research. Emphasis is placed upon planning a well-designed clinical trial and writing a well-organized grant proposal.

# POPM\*6250 Project in Epidemiology S [1.00]

Collection and analysis of field data and the preparation of a written report suitable for publication, and oral presentation of the findings to the graduate faculty. This course is part of the MSc program by course work in epidemiology.

#### POPM\*6290 Statistics for the Health Sciences W [0.50]

This course gives an overview of advanced methods for the analysis of data of clustered/correlated data. Special emphasis is on spatial, longitudinal and survival data.

Prerequisite(s): POPM\*6200 or STAT\*2250 or equivalent

# POPM\*6520 Introduction to Epidemiological and Statistical Methods F [0.50]

This is a 0.5 credit introductory graduate course for MPH students and students interested in epidemiology. The course will provide an introduction to research design, grant proposal writing, and critical appraisal, as well as survey (questionnaire) design and basic statistical methods for epidemiological studies.

Co-requisite(s): POPM\*6200

#### **Health Management**

# POPM\*6400 Dairy Health Management \* S [0.50]

This course stresses a population-based, herd-level approach to dairy herd health management, in which optimizing the efficiency of the dairy enterprise is the overall goal. The biological and economic impacts of disease and management deficiencies on herd performance will be discussed as they relate to design and implementation of herd health programs. The course will emphasize the critical role of record keeping, data analysis and monitoring on program success.

# POPM\*6700 Swine Health Management \* U [0.50]

Diseases of swine are studied with particular emphasis on preventive medicine and herd-health management.

## Theriogenology

# POPM\*6610 Theriogenology of Cattle \* U [0.50]

A lecture/seminar course emphasizing the relationship of nutritional, genetic, endocrine, anatomic, and environmental factors with the reproductive health of cattle. Application of reproductive technologies will also be covered.

# POPM\*6630 Theriogenology of Horses \* U [0.50]

A lecture/seminar course covering the genetic, endocrine, anatomic and environmental factors that affect reproductive performance and health of horses. Breeding management, including recent technologies, and management of the infertile animal will be included.

#### POPM\*6650 Theriogenology of Dogs and Cats \* U [0.50]

A seminar/lecture series that includes the theory and management of clinical reproduction for the dog and cat, including use of developing technologies.

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#### POPM\*6670 Theriogenology of Small Ruminants \* U [0.50]

A seminar/laboratory course emphasizing advanced reproductive management of sheep, goats and farmed deer/elk, with the emphasis on a sheep production model. New reproductive technologies will be included.

#### Other

#### POPM\*6100 Seminar F [0.00]

A practical course that utilizes tutorials, workshops, self and peer reviewed assessment to help participants develop skills in public speaking and presentation of scientific data. Each student presents at least one seminar on an approved subject during the departmental seminar series.

# POPM\*6350 Safety of Foods of Animal Origins F [0.50]

The detection, epidemiology, human health risk, and control of hazards in food of animal origin.

Restriction(s): Offered by distance education only.

#### POPM\*6510 Community Health Promotion F [0.50]

The objective of this course is to provide students with an understanding of public health, population health and health promotion. Topics will include perspectives on health and illness, injury prevention, determinants of health, population diversity and the role of evidence in public health decision-making.

# POPM\*6530 Communication and Leadership I W [0.50]

This course fosters development of several written and oral communication skills, including conflict resolution. It introduces a number of theories of leadership, emphasizes the components of effective leadership and describes the practical role of the leader.

Restriction(s): MPH students. All others must obtain instructor's signature.

#### POPM\*6540 Concepts in Environmental Public Health W [0.50]

This course covers the main concepts of environmental public health including basic elements of environmental toxicology, risk analysis, air and water quality, food safety, waste managment, occupational health and eco health.

#### POPM\*6550 Public Health Policy and Systems W [0.50]

This course covers concepts and principles of public health policy and systems including: public health systems, their structure, funding and governance and their integration into the healthcare system; evolution of public health policy; models of policy development and analysis; stakeholder analysis; and, public health ethics.

#### POPM\*6560 Public Health Practicum S [1.00]

In this 1.0 credit course, students will synthesize theoretical concepts, learned via prior coursework, with public health practice. Students will work in a host public health agency for a 12-to 16-week period, focusing on a major project of significance to the host organization.

Prerequisite(s): POPM\*6200, POPM\*6510, POPM\*6520, POPM\*6530, POPM\*6540,

and POPM\*6550

Restriction(s): MPH students only

## POPM\*6570 Communication and Leadership II W [0.50]

This course develops advanced communication skills, including scientific communications and media relations, and addresses leasership topics relevant to public health practitioners. Students will integrate prior project material into this course, producing a major paper that will be presented orally at the Public Health Forum Day.

Prerequisite(s): POPM\*6560 or instructor's signature required

# POPM\*6580 Public Health Administration F [0.50]

This course will teach students to develop, implement and evaluate public health programs. Knowing an organization's mission and priorities, developing strategic plans and conducting a cost-benefit analysis is critical for an effective administrator. Furthermore, conducting a program evaluation, understanding the role of advocacy is vital.

# POPM\*6950 Studies in Population Medicine U [0.50]

Assigned reading and/or special projects selected to provide in-depth study of topics appropriate to the specialized interests of individual students. Courses offered under this title have included Special Topics in Public Health; Ecology and Health; Systems Approaches; and Animal Welfare. Different offerings are assigned different section numbers.