

MPH: Epidemiology

Field of Study

[Epidemiology](#)

Degree Overview

Program Description

The MPH in Epidemiology provides a solid base in epidemiological methods, an understanding of the breadth of community health and opportunities for applied experiential learning in epidemiologic practice, research and policy. The degree program is intended for students who want a research career (including the pursuit of a [PhD in epidemiology](#)), and those who want to work in an applied public health setting.

The curriculum emphasizes quantitative methods, critical appraisal of evidence, data analysis and interpretation. In contrast to strictly skills-based training, the degree is aimed at developing leaders who will make independent contributions when faced with public health challenges, and direct initiatives in the field. In addition, completion of the program meets the requirement for physicians training to be Medical Officers of Health in Ontario, and Royal College of Physicians and Surgeons of Canada requirements for [Public Health and Preventative Medicine](#) residency program.

Program Goals

The objective of the program is to provide students with a base of knowledge and skills in epidemiological methods and public health that will enable them to pursue careers in applied epidemiological research, or evidence-based public health practice.

Program Objectives

Graduates will:

- be able to work as part of a research group or in public health practice;
- be able to describe trends and patterns of disease incidence and prevalence, disease burden, factors affecting health status, and major etiologic and prognostic factors;
- understand the strengths and weaknesses of major methodological and analytical techniques;
- exhibit practical skills, including the ability to develop an epidemiological question, refine the question in light of the literature and community situation, design an appropriate study to answer the question, collect relevant data, analyze these data using commonly available statistical software, and interpret the findings relative to the literature and the community/ organizational context;

- be able to prepare a paper for peer-reviewed publication, and present epidemiological information;
- have knowledge of public health principles and practice; and
- be able to read, understand, and critically appraise the scientific literature, and understand the effectiveness of core public health interventions.

Click [here](#) to view MPH Competencies

Career Opportunities

Our graduates have pursued careers in academic research institutes, applied research agencies, and public health settings

Admission Requirements

In recent years, admission to the MPH Epidemiology program has been very competitive. The most highly ranked applicants to the MPH program in Epidemiology have evidence of qualifications in all of the following areas and are often exceptional in several:

- quantitative skills (see Undergraduate Statistics Requirement)
- writing and scholarly research experience
- knowledge of human health and/or its physical, social and environmental determinants
- maturity, professionalism, and strong communications and interpersonal skills
- a genuine interest in graduate training in the discipline of epidemiology which is well-articulated and supported by past behavior including prior choices made in training, volunteer and paid work experiences

We advise all prospective students to review the general [admission requirements](#) prior to submitting an application. From this [link](#), information about how to submit an application, timelines and specific information for international applicants can be obtained. Applicants from a variety of disciplines including biological and health sciences, quantitative social sciences and health professions are encouraged to apply. Professional experience relevant to public health or research is a definite asset. All paid work experience (even if unrelated to public health) should be described in the curriculum vitae, as well as volunteer positions which entail training and accountability.

Epidemiologists are expected to bring expertise in quantitative research and evaluation methods to all settings in which they work. Applicants must clearly meet or exceed the minimum requirement.

Admissibility requires at least one undergraduate statistics course with a grade of B+ or higher and which

covers the required subject matter. Please click [here](#) for details about the statistics prerequisite. It is the applicant's responsibility to select course(s) which cover all of the required content for the statistics prerequisite and to provide that evidence within the application submitted. In practice, two or more terms/courses in statistics or data analysis are often required to cover the required content, and admissions committees expect a standing of at least A- in quantitative courses. Qualifying courses also must be finished with grades appearing on transcripts prior to the application deadline.

All applicants should seek experiences which develop the skills described above. For example, proof of the ability to write may be developed through appropriate courses or publishing papers. Additional mathematics and professional work with data analysis are also considered by the MPH Epidemiology Admissions Committee, particularly for applicants with greater experience. For more information on eligibility and upgrading, see FAQs, below.

Program Requirements

Click [here](#) to review the MPH-Epidemiology Program: Full-time Student Timeline

TERM	Course/Practicum	FCEs
Year 1, Fall Term (September – December)		2.5 - 3.0
	CHL5004H: Introduction to Public Health Sciences¹	0.5
	CHL5201H: Biostatistics for Epidemiologists I	0.5
	CHL5300H: Public Health Policy	0.5
	CHL5401H: Introduction to Epidemiology	0.5
	CHL5426H: Population Perspectives for Epidemiology	0.5
	Elective	0.5
Year 1, Winter Term (January – April)		2.5 - 3.0
	CHL5202H: Biostatistics for Epidemiologists II	0.5
	CHL5402H: Epidemiologic Methods II	0.5
	CHL5405H: Health Trends and Surveillance	0.5

CHL5418H: Scientific Overviews in Epidemiology 0.5

1 – 2 Electives 0.5 –
1.0

Students will typically select summer practicum placements starting in January of this term.

Year 1, Summer Term (May – August)

CHL6010Y and CHL6012Y: Required MPH Practicum (16 weeks full time) 2.0

Students must successfully complete all required first year courses, listed above, before progressing to the practicum. Evolution of a practicum placement into a Capstone Experience may occur during the first practicum. Please see also [MPH Epidemiology Practicum Guidelines](#) for more information on practicum options and procedures.

Year 2, Fall Term (September - December) and Winter Term (January – April)

In their second year, students complete diverse combinations of approved graduate credits (regular courses or additional practicum placements) to bring the total number of approved graduate credits completed to 10.0 FCE. Elective courses may include 2.5 -
3.5 additional offerings in the DLSPH listed under any of our disciplines. Students interested in taking graduate electives outside the School of Public Health may do so, but are encouraged to consult with the MPH Program Director before enrolment.

TOTAL 10.0

NOTES

1. CHL5004H begins earlier in September than regularly scheduled graduate courses.

Electives

Students are encouraged to take elective courses that will enhance their learning experience and/or provide focused study on a particular topic. Please check the DLSPH timetable for a list of courses available each academic year. If you have any questions about the appropriateness of a course, please speak with the MPH Epidemiology Program Director.

Practicum

*****Potential Practicum Supervisors:** *If you are interested in engaging a student for a practicum experience, [please complete this form](#) and return it to practicum.dlsph@utoronto.ca.*

All MPH Epidemiology students complete at least one practicum placement in an applied public health or research setting and must include an element of quantitative work. Students wanting a thesis-like experience should explore the capstone option (please see [MPH Epidemiology Practicum Guidelines](#) for more information on practicum options and procedures).

To gain a better understanding of the work that MPH Epidemiology students have undertaken during their first practicum placement, [click here](#) for a listing of descriptive abstracts from summer 2014 placements. Students have given their consent to share these abstracts.

This presentation is offered during orientation to incoming MPH Epidemiology students. It contains, in ppt format, some basic information regarding the practicum.

For further information regarding the Roles and Responsibilities of the student and practicum supervisor while on placement, as well as the process and requirements of practicum supervisors, please [click here](#).

The required forms for the MPH Epidemiology practica in word format are available below:

[Learning Contract](#)

[Interim Evaluation \(student\)](#)

[Interim Evaluation \(Supervisor\)](#)

[Final Evaluation \(Student\)](#)

[Final Evaluation \(Supervisor\)](#)

[Amendment Form](#)

Epidemiology applicants are not required to identify a faculty supervisor, or practicum placements, prior to admission. Practicum opportunities will be presented to students admitted to the program. Applicants wishing to work, or apply for research funds, with a specific DLSPH supervisor are encouraged to explore this as early as possible, understanding that these arrangements are conditional on an acceptance into the MPH program through the same annual admissions process.

Other Educational Opportunities

[Global Health Emphasis](#)

[Collaborative Programs](#)

[Strategic Training Program in Public Health Policy](#)

[Strategic Training for Advanced Genetic Epidemiology](#)

FAQs

Who should apply?

We encourage all applicants who are serious about developing strong methodological skills and applying these skills in their chosen career in: applied public health practice; field epidemiology; population health and surveillance; program evaluation; or, epidemiologic research. Applicants are welcomed from the biological and health sciences, quantitative social sciences including psychology, sociology, economics, anthropology and other fields, and from clinical backgrounds paired with a demonstrated interest in population health practice and/or research.

Is this program right for current and future health professionals?

Yes, if your goal is to pair your clinical experience with specialist-level training in epidemiology and population health. The DLSPH Epidemiology program is not exclusively designed for clinician scholars, nor does the program provide training specifically in clinical epidemiology or laboratory research. All MPH students must complete the program, as described, in its full depth and breadth. The critical thinking and research skills developed in this program are highly relevant in medicine and other clinical sciences. Roughly 10 % of our MPH students have clinical backgrounds, and a similar percent of our recent alumni have undertaken further clinical studies after the degree

How does this Master's program compare to other MPH and epidemiology programs?

There is enormous variability across master's programs in the broad fields of public health and biomedical research. At DLSPH, all MPH Streams are specialized and discipline-specific, as opposed to offering a generalist training in public health. Each stream aims to ensure that graduates possess the full range of core competencies expected in that discipline, regardless of one's specific areas of interest or immediate career plans. All Epidemiology graduates will possess the essential skills for both applied and research epidemiology.

Compared to MPH degrees at other Universities, the DLSPH Epidemiology stream is in the upper half of the spectrum in terms of program length and workload across courses. It is highly structured compared to many research-focused Master's degrees in epidemiology, clinical epidemiology or clinical sciences. Roughly half of the program (10 one-term courses or equivalents, 5.0 FCE) is made up of mandatory core courses and a practicum experience. The remaining credits are electives (additional courses and practicum) which provide opportunity for breadth, or sub-specialization. Taking a full course load, the program can be completed by January of the second year. The majority of full-time students complete the program at the end of the Winter term, second year.

What methods of student learning and evaluation can I expect?

Students will experience a mix of learning and evaluation techniques, matched to the skills being developed. Courses will involve all of: quizzes and exams; graded tutorial assignments; structured reports; independent research essays; case-studies and problem-based learning; and, evaluation of student participation and professional behaviour. Some courses have larger lecture sessions (especially earlier in the program and where multiple disciplines come together), but all courses provide opportunity for discussion, either within the class itself or through tutorial sessions. Core courses, electives, and practicum experiences afford substantial opportunity for individual mentorship by researchers and professionals based on and off-campus. All courses require evaluated student work for either a CR/NCR mark or letter grade (a minimum grade of 'B-', equivalent to 70%, is required to pass).

Students should expect a heavy load of reading and writing, and will be expected to use reference texts, online materials and general library facilities for self-directed learning and research. Effective use of computers and communications technology will be essential, as will good time management and exercising one's ability to perform on multiple tasks and responsibilities at the same time.

Can I study part time?

We do have part time students who work or alternate between months of MPH studies and employment or study elsewhere. However, completing the MPH program part-time takes considerably longer. Most core courses are offered once per year, Fall or Winter term, and weekdays, 9:00am to 5:00pm. Attendance on campus is essential although online materials, webinars and other distance-based learning opportunities are a growing component of the DLSPH programs. In the event you choose this option, you will be required to work with the Program Director to map out your curriculum for the duration of your part-time studies. Once in the program, this will be used as a guide to measure your progress.

Am I guaranteed an offer when I meet the stated minimum requirements?

In recent years, fewer than half of all applicants who do meet minimum requirements have received an offer of admission.

Should I apply anyway, if I do not meet the minimum requirements?

Applicants who do not meet the stated minimum program requirements (i.e., qualifying grades for general [admission requirements](#) for graduate programs in DLSPH and the [Undergraduate Statistics Requirement](#) will not be accepted into the program. In addition, satisfactory [English Language Proficiency](#) test results must be provided with the application, where applicable. This requirement will not be waived for Epidemiology programs.

Applicants who have taken statistics courses which cover our required content areas should take additional credit course(s) to cover the required content before applying. Applicants who have received poor marks in math and statistics should not repeat courses at the same level, but take more advanced courses and strive to get very good marks. This would indicate skills in quantitative methods and a willingness to undertake more training in statistical methods.

While good grades are important, they are only part of the picture. As this is a professional master's program, paid work experience and evidence of strong interpersonal skills are assets. All applicants should seek experiences which develop all the qualification areas described above. For example, proof of the ability to write may be developed through appropriate courses or publishing papers. Genuine interest in research and public health may be proven through additional work experience.

The DLSPH Epidemiology Division cannot assess, in advance, the eligibility or competitiveness of a potential applicant, this can only be evaluated based on a complete application, and then also depends on the volume and quality of applications in a given year. For general advice, applicants should use the career and academic counselling services of their current or former university/ies for these services. For more information about the program and applications process, DLSPH staff are available at Open House sessions, webinars and graduate fairs at many times of the year.