Public Health Sciences
PhD orientation 2020

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Dalla Lana School of Public Health (DLSPH) is a faculty of the University of Toronto.

Two graduate departments:
- Graduate Department of Public Health Sciences (PHS)
- Institute of Health Policy, Management and Evaluation (IHPME)

The PHS PhD program has four fields of study in:
- Biostatistics
- Epidemiology
- Occupational and Environmental Health (OEH)
- Social and Behavioural Health Sciences (SBHS)

As administrative units, DLSPH has divisions with the same names.
During your PhD studies you might come across the PHS Graduate Coordinator.

The Graduate Coordinator serves as a general advisor for all PHS students registered in PHS’s professional and research (PhD, MSc, MPH, MScCH, MHSc) programs, and works with the Graduate Office and Program Directors on various program administration related tasks.

Is an active DLSPH faculty member.

Reports to the Associate Dean, Academic Affairs.
How did you end up here?

- The four fields of study have their own admission committees and requirements, but generally the eligible applicants hold a Master’s degree and have relevant field-specific research experience.

In some fields, the successful applicants are already matched with potential supervisors, for others this may take place later.

2020 numbers: 30 new PhD students (7 international) out of 145 applicants.
A bright young chachem told his grandmother that he was going to be a Doctor of Philosophy. She smiled proudly: ‘Wonderful. But what kind of disease is philosophy?’

Leo Rosten

The latin meaning of ‘doctor’ is ‘teacher’; once you receive your PhD, you are ready to teach others.
The PhD program will provide training in independent research.
This does not mean that all graduates will end up as researchers in the academia (though a plurality will); the graduates are also well prepared for leadership or supervisory roles in research institutes, government departments, hospitals, or industry (e.g. pharmaceutical).
What happens next?

- You are not PhD candidates yet. (PhD candidate-candidate?)

Path to candidacy:
- Completing the coursework.
  - Passing the qualifying/comprehensive exams.
- Assembling a thesis advisory committee (supervisor, possible co-supervisor, committee members).
- Writing and successfully defending a dissertation proposal (‘research proposal’, ‘protocol’).

This takes 2, at most 3 years.

Complete thesis and successfully defend it, in 4-5, at most 6 years.

Departmental defense and School of Graduate Studies defense (Final Oral Examination).
Thesis

- cf. ‘hypothesis’, which is just a conjecture, thesis is a proposition supported by arguments.

In your case, it is a written report of an original research study. Thesis can be a monograph, or sandwich/manuscript based (typically 3 publishable manuscripts between an introduction and a discussion). Appropriate scope is determined by the advisory committee.
Research

Miettinen (2011):

Research - In natural science, inquiry into an abstract truth about Nature, specifically the studies on a given object of inquiry in the aggregate, as a whole.

Study - A piece of research; that is, a project to produce evidence (for inductive judgments) about the abstract truth (unknown) at issue.

Your study requires planning; hence the protocol defense. Your immediate challenge will be to find a research question that both can be answered and has not yet been answered. The intersection of such problems is small; the low-hanging fruits have already been picked. Fortunately, research is formulaic (predictable) in nature, and you will get better at it through repetition.
Flow diagram of research (thanks to Thai-Son Tang)
(Quantitative) study flow

Objective design

H₀ : θ = θ₀

Methods design

Model

(a sample of)
Data (consisting of datums)

Descriptive statistics

Evidence

Data synthesis

Inferential statistics

θ

H₀ : θ = θ₀

p(· | θ)

p(y | θ)

p(θ)

p(θ | y)

θ̂
To identify your research question, you should start now; the Fall award application deadlines are approaching.

For the application, you need to prepare a research proposal summary. This has to answer three questions:

- *What* do you want to achieve? (objectives)
- *Why* are you doing it? (goal, knowledge gap to motivate the objectives, significance)
- *How* are you going achieve it? (approach to achieve the objectives)

Contact your supervisor and start thinking about these questions early on.

Good luck in your research career.