Master of Science in Health

Health: Science, Technology and Policy Program

2020-2021 Academic Year

Health: Science, Technology, and Policy Program
Carleton University
Health Sciences Building
Ottawa, Ontario
K1S 5B6

Dear HSTP Student,

On behalf of the Department of Health Sciences, we are excited to welcome you to the Health: Science, Technology, and Policy (HSTP) program at Carleton University. The distinctive features of the HSTP include an emphasis on skill acquisition, using problem-based approaches to understand health issues and sectors, and participation in collaborative interdisciplinary research projects.

This student handbook includes helpful information on the HSTP program, courses, key contacts, and Carleton University services. We encourage you to explore the links embedded in this document to broader Carleton policies and procedures.

The Department of Health Science offers a truly interdisciplinary program with access to exceptional laboratories, research labs, and passionate faculty members. We are confident that your graduate school experience will be an exciting time and we hope you will take advantage of all of the opportunities available to you.

The health and safety of our students, staff and faculty is our top priority and the first guiding principle in all of our plans. In line with public health information available at this time, all scheduled courses for the fall term will be delivered online. This means that if you are unable or choose not to live in Ottawa this fall, you can successfully complete your courses at Carleton from a distance. We will provide guidance on the winter term as soon as any new information or guidelines becomes available. Any questions you may have that are not answered by Carleton's COVID-19 information website and its FAQ section should be forwarded to covidinfo@carleton.ca. Any specific departmental questions should be forwarded to clairemacarthur@carleton.ca

If you have any questions, please do not hesitate to reach out to us.

With respect,

Martin Holcik	Paul Peters	Francine Darroch
Departmental Chair	Graduate Coordinator	HSTP Coordinator

Table of Contents

Overview of HSTP Registration Procedures & Course Progression

Like most graduate programs, the MSc in HSTP is a **full-time program** for five (5) continuous terms. This includes the summer term after first year. Students are expected to enrol in all courses full-time. Students are further expected to work with supervisors on research projects and meet with team members outside of scheduled class time during all five terms, and in particular during the summer. In order to maintain a reasonable work-life balance, it is strongly suggested to not engage in outside work more than 15 hours per week.

Below are some guidelines to help you navigate the program:

A. Resources and Contacts

The information contained within is accurate as of June 2020. However, the Department of Health Sciences reserves the right to correct any errors. If you have any questions about the program, **first** contact the graduate administrator, who will answer or direct your question to the appropriate person or resource.

Claire MacArthur — Graduate and Department Administrator, Department of Health Sciences
claire.macarthur@carleton.ca
Contact Claire for help with processes (e.g. registration, program/course questions). Any questions that Claire cannot answer, she will direct to the appropriate person or resource.

Dr. Francine Darroch – Coordinator, Interdisciplinary Health Research Project, Department of Health Sciences
francine.darroch@carleton.ca

Dr. Paul Peters — Graduate Advisor, Department of Health Sciences
paul.peters@carleton.ca

Dr. Martin Holcik — Chair, Department of Health Sciences
martin.holcik@carleton.ca

B. September 2020 Orientation (required for all new students in the HSTP program)

When: Wednesday, September 09, 2020 at 9:30am (additional details to follow)
Where: Via Zoom

Orientation will be held via Zoom this year. You will have the opportunity to meet the other HSTP students, the Graduate Administrator, and the professors in the Department of Health Sciences.

C. Registration and tuition

Registration occurs through Carleton Central (http://central.carleton.ca/) using your student ID and password. Registration for returning and new graduate students will open as of July 3, 2020 (https://carleton.ca/registrar/registration/timeticket-information/time-tickets/)**.** You must register for both the Fall and Winter Terms of 2020-2021. Summer Term registration will be available **at the end of March 2021**.

Please note you will not be able to register for classes until the conditions have been removed from your offer of admission. Often the condition is to have an official transcript of your undergraduate degree sent to the Carleton University's Faculty of Graduate and Postdoctoral Affairs (FGPA). For those who have graduated this spring from Carleton University, your official transcript will be uploaded by FGPA once Senate confers the degree. International students must be sure to contact WES Canada (www.wes.org/ca) to request an Academic Credential Evaluation sent to FGPA. All others must request official transcript from their previous academic institution.

You can find your tuition fees here: https://carleton.ca/studentaccounts/tuition-fees/. Once you have finalised your course selection, you will be able to access your tuition on Carleton Central. Once you choose your courses and register in them, while in Carleton Central, you can jump to Student Accounts and click on calculate amount to pay. Scholarship funding can be used as partial payment but you will need to make fee payment arrangements for the remainder of the balance.

D. The HSTP MSc

D.1 Program Sequence

Year 1	**Fall term 2020 ONLINE COURSES**	• HLTH 5100, HLTH 5150, HLTH 5350, HLTH 5401 • HLTH 5504 (or HLTH 5505)
	Winter term 2021	• HLTH 5201, HLTH 5300, HLTH 5402 • HLTH 5504 (or HLTH 5505)
	Summer term 2021	• HLTH 5504 (or HLTH 5505) • Recommended to take majority of electives The department will offer 0.5cr elective during the summer. You are encouraged to look into courses offered in other departments, a directed studies course in Health Sciences, and/or an exchange course through UofO; see section D.5 regarding this process.
Year 2	**Fall term 2021**	• HLTH 5504 (or HLTH 5505) • Any remaining elective courses (i.e HLTH 5702 or others)
	Winter term 2022	• HLTH 5504 (or HLTH 5505) • Any remaining elective courses (i.e HLTH 5151, HLTH 5703 or others)

D.2 Required courses for the HSTP MSc (4.5 credits)

The HSTP MSc is a **full-time** program of study.

- Required courses must be taken in above designated sequence (3.5 credits):
    - 0.5 credit in HLTH 5100 Fundamentals of Research Methods
    - 0.5 credit in HLTH 5150 Statistics for Health Sciences
    - 0.5 credit in HLTH 5201 Fundamentals of Policy I: Policy Analysis
    - 0.5 credit in HLTH 5300 Knowledge Translation
    - 0.5 credit in HLTH 5350 New Health Technologies
    - 0.5 credit in HLTH 5401 Interdisciplinary Problems in Health
    - 0.5 credit in HLTH 5402 Biological and Social Fundamentals of Health

- Required Research Project (1.0 credits):
    - 1 credit in HLTH 5504 (group) or HLTH 5505 (individual; when available) Interdisciplinary Health Research Project
        - Taken throughout the program (you must register for this course for 5 consecutive terms)

D.3 HLTH 5401 – Interdisciplinary problems in health (0.5 credits)

Through this course, students will develop an understanding of the scope and interdisciplinary nature of issues that impact the health of Canadians.

Some assignments will be related to the 5504/5505 research projects.

D.4 HLTH 5504/5505 – Interdisciplinary Health Research Project of the HSTP MSc (1.0 credits)

This one-credit Interdisciplinary Health Research Project (individual or group) is the primary research component of the HSTP MSc. More information about the projects and expectations are below.

Like many science graduate programs, the MSc in HSTP includes a research component - the Interdisciplinary Health Research Project. This capstone research project is comparable to a graduate-level thesis requiring a similar level of project ownership by students. Unlike traditional thesis projects, however, the HSTP research projects are typically team-based, and therefore with increased level of project quality expectations. It is important to understand that although the research projects are group based, there are components of the project where individual assessment may be done by the supervisor, which could result in students within the same group receiving a different grade. (i.e. students completing the group-based project [HLTH 5504] will be assessed based on their *individual* substantive contributions to the project. This includes attendance and participation in group meetings.) It needs to be further emphasised that a failing grade will be received for the research project (and thus the entire program) if the students do not demonstrate graduate level standards of scholarship, or if the project is not completed on time.

HLTH 5504 and 5505 are unique in design, with different expectations than a conventional thesis research project. However, the research project is a graduate level thesis-equivalent, requiring a comparable level of investment of time and effort. As such, plan that the research project will require **a minimum of 30-40 hours per week** per student. 5504 and 5505 are scheduled as a course so that you will have minimum 3 hours of protected time each term (Mondays from 2:30-5:30pm in the fall term, and Mondays from 11:30-2:30pm in the winter term) towards your research project endeavours. This is not traditional class or lecture time. It provides a time when the student (for individual project) or all members (for the group project) must be available to meet with each other and, at times, with the research project stakeholders, research supervisors, topic experts, etc. You will still have to find time each week outside of the protected 3 hours to devote towards your research project, meet with your supervisor, and ensure you are meeting the 30-40 hour commitment.

It is advised that meetings during the Fall 2020 term should occur virtually.

D.4.1 HSTP projects for 2020-2022

The provisional titles of the upcoming HSTP projects are:

- Creation of the Mitochondrial Patient Registry
  Supervisor: Dr. Martin Holcik, Dept of Health Sciences at CU
- Trauma-informed Physical Activity for Parenting Individuals
  Supervisor: Dr. Francine Darroch, Dept of Health Sciences at CU
- Development of a tool to predict resiliency and risk for chronic diseases due to early life exposures
  Supervisor: Dr. Kristin Connor, Dept of Health Sciences at CU
- Assessing acceptability, understandability, and effectiveness of alternative donor screening questions for blood and plasma donors
  Supervisor: Dr. Jennie Haw, adjunct professor at CU, Organization: Canadian Blood Services
- Effect of Increasing Sleep Duration on Insulin Sensitivity in Adolescents having Risk Factors for Type 2 Diabetes
  Supervisor: Dr. Jean-Philippe Chaput, adjunct professor at CU, Organization: Children's Hospital of Eastern Ontario
- To promote and assess healthy active living among children and youth.
  Supervisor: Dr. Mark Tremblay, adjunct professor at CU, Organization: Children's Hospital of Eastern Ontario
- Development of a predictive analytics model/proof of concept for predicting food safety events/incidents
  Supervisor: Dr. Christiane Villemure, Organization: Canadian Food Safety Information Network of Science Branch, Food Safety Science Directorate

All students provided their project preferences. All efforts were made to accommodate students top three choices when assigned projects & supervisor(s).

D.4.2 The HSTP program is a full-time program of study; it is recommended that students do not work full-time while completing their studies. HSTP students working part-time must arrange their part-time work schedules around the HSTP program. This ensures their availability for scheduled meetings, courses, and other program-related commitments, including research and meetings with supervisors. The need to prioritise the MSc over part-time work ensures the timely completion of course and project milestones and deliverables.

For any questions relating to the research project, contact the course coordinator Dr. Francine Darroch (francine.darroch@carleton.ca).

You can also refer to the HSTP Interdisciplinary Health Research Project Guidelines in the appendices for further details.

D.5 Elective courses for the HSTP MSc (1.5 credits)

We recommend that you complete the 1.5 credits of elective courses during the Winter 2021 and Summer 2021 terms of the program to provide sufficient time in the second year to focus on the completion of the research project. Students are encouraged to look outside of the Health Science Department for the electives in order to increase the breadth of their learning.

*HLTH 5151 is ***strongly*** recommended as an elective, and will be offered during the Winter 2021 term.
The process for selecting graduate level elective courses:

1. Consider your reason for taking the HSTP program, including your career goals. Use this to help you identify topics and expertise that will help you to acquire the knowledge and skills you need to reach your goals.

2. Determine if you have the required background to succeed in a graduate level course in the area(s) you have identified. If you do not have sufficient background, an option might be to take additional prerequisite course(s) to build up your knowledge in the area. You must contact the instructor of your graduate course of interest to determine if you have the prerequisites to take the course, and to determine if there is space available for you in the course.

3. Review the graduate calendar (https://calendar.carleton.ca/grad/) to identify available course titles and descriptions in your target area, then review the Public Class Schedule (https://central.carleton.ca/prod/bwysched.p_select_term?wsea_code=EXT) to verify actual dates/times of course offerings per term. Be sure that none of your proposed electives conflict with required HSTP courses with respect to scheduling, or overlap in topic.

4. Identify a list of courses of interest (i.e. more than the 3 elective courses needed for the MSc) as you may discover that some choices are not optimal/appropriate. Some courses may be full or core courses restricted to students in another program. For each course on your list that is outside of the HSTP HLTH courses, write a very short paragraph explaining why the course is of interest to you, demonstrating that you have the necessary background to succeed in the

course, and discussing how the course is aligned with your career goals. These notes will assist you when contacting a course instructor to seek approval to take a course.

5. The Department of Health Sciences offers some elective courses each year, with the number and topics depending on demand and availability. As a student registered in the HSTP program, you have the right to register for these HSTP-specific HLTH courses, but, as they are electives, they are optional. Examples of courses offered and/or planned include health policy and administration, health of populations, biostatistics, and epidemiology.

D.5.1 HLTH 5801: HSTP Practicum Placement

MSc in HSTP students have the option to do a practicum placement as one of their elective courses (worth 0.5 credit). This practicum supports students in gaining relevant and practical experience through applying course learning at approved organizations. Students are responsible for arranging the placement with an external partner where the practicum will be held, preparing a learning contract, and completing a field-based project deliverable and final report. Students must complete a minimum of 100 hours and a maximum of 150 hours to complete the practicum as well as meeting expectations of the placement supervisor. For more information, please see FAQ's in Appendix D on page 28. For additional information about this option, please speak with Dr. Francine Darroch.

D.6 Special Consideration for Electives in Departments / Universities external to Health Sciences

Registration in courses in other departments at Carleton University or at other universities is not guaranteed and requires that you complete requirements at the other university as well as ensuring that you can transfer credit to Carleton University. Thus, you need to start the planning for electives well in advance, as many universities require a formal application process.

At Carleton University, registration in elective courses in other departments depends on a variety of factors including available space in the course and your ability to satisfactorily demonstrate to the course instructor (and/or program administrator) that you have the required prerequisites and/or knowledge. We work to establish relationships with other units to facilitate this, but it is challenging to predict student interest in courses in advance, as each HSTP cohort is diverse and distinct.

The process of approval of Carleton University elective courses that are external to the Department of Health Sciences are as follows:

- Be sure you meet the prerequisites for the course, and that the course is not restricted (i.e. you may need to inquire with the program administrator).
- Contact the course instructor to introduce yourself and to ask permission to register in the course. At this time you may also ask for the course syllabus (which you will need for approval on our end).
- Complete the "External to department elective approval form" (found here - https://carleton.ca/healthsciences/health-sciences/graduate/forms-guidelines-and-

documents/ . Email the completed form, and course syllabus, to Dr. Paul Peters for approval (cc Claire MacArthur)

- Once approved, you may register for the course via Carleton Central. *You may require an override request, in which case it's best to contact the program administrator who oversees the course of interest.
- Please keep in mind that departments generally ensure that their own students have registered first before allowing other students to register. Enrolment limits for graduate classes are often related to the class format. For example, the student experience is diminished if a seminar and discussion-based class exceeds 25-30 students.

You may be able to take a course at the University of Ottawa or another university (e.g. in the summer or by distance education options, if available). However, the process for making these requests takes time and requires signatures from both institutions so plan early. You may speak with Claire MacArthur to discuss these options, and to go over the processes.

E. HSTP Diploma (Type 3; for students not registered in another Carleton graduate program)

The HSTP Diploma requires 2.0 credits.

E.1 Courses

0.5 credits of required courses:

- HLTH 5300 Knowledge Translation (0.5 credits) – recommended in year 1 of Diploma

1.5 credits of elective courses:

- See information in MSc section above on selection and registration for elective courses

*As scheduling is done centrally at the University and varies from semester to semester, we are unable to predict timing of classes. Therefore, your required and/or elective courses will likely be scheduled during the day. If you are working, you will likely have to make arrangements with your employer to attend these classes. Please note we do not offer courses on weekends or online.

F. The HSTP Diploma (Type 2; for students registered in another Carleton graduate program)

The HSTP Diploma requires 2.0 credits.

F.1 Courses

1.5 credits of required courses:

- HLTH 5100, HLTH 5201, HLTH 5300

0.5 credits of elective courses:

- See information in MSc section on selection and registration for elective courses

G. Code of Conduct

It is expected that you will conduct yourself in a professional manner. This includes how you communicate with your Professors, Instructors, external partners, and each other.

We respect personal gender pronouns and will refer to you in whatever way you would like to be identified (e.g. she/her/hers, he/him/his, they/them/theirs. Additionally, if you prefer to be addressed by Ms./Mrs./Mr. Lastname, or a first name other than what is on the class list (e.g.: Liz instead of Elizabeth), please let your Professors, Instructors and peers know.

H. Department of Health Sciences Statement on Anti-Racism and Discrimination

The Department of Health Sciences at Carleton University, Canada, stands in solidarity with members of Black, Indigenous and other racialized minorities calling for justice against historic and ongoing state-sponsored violence.

We are committed to educating ourselves and fighting oppression and discrimination while providing a space free of prejudice for our students and all members of the community. We will work to address racism, racist violence, and discrimination through ongoing conversations and awareness-building.

Addressing the issues of racism and inequality will require significant commitments and ongoing efforts by many organizations….and by each of us as individuals. We are dedicated to working with our community to develop solutions that ultimately help bring an end to these longstanding injustices.
To this end we affirm:

- To recognize that racism and discrimination is a public health crisis and publicly affirm our identity as an anti-racist academic department;
- To explicitly identify, discuss and challenge issues of race and the impact(s) they have on our organization, its systems, and its people;
- To also challenge ourselves to understand and correct any inequities we may discover;
- To ensure our anti-racism commitment is reflected in all teaching, supervision and advising in the department; and,
- To implement strategies that dismantle racism and discrimination within all aspects of our department, university, and society.

To provide action to our statement, we will:

- Initiate a task force as soon as possible to examine departmental practices;
- Solicit feedback from students, faculty, and staff on challenges and strengths of our current practices (e.g. in recruitment, retention, and recognition);
- Provide representation with the Faculty and University on their strategic initiatives;
- Develop, by the end of 2020, a strategic plan for how our unit will meaningfully address systemic racism and increase equity, diversity, and inclusion over the next 1, 5, and 10 years.

I. Academic Integrity

Carleton University details its academic integrity policies and associated documents at the following site: https://carleton.ca/registrar/academic-integrity/

All work, including the research, preparation, and writing of the deliverables in this program, is to be that of the individual student, acting alone (except in the case of explicitly assigned group-work or the collaborative research project), and original to the course. You cannot submit, in whole or in part, works prepared for another class or purpose.

For example, plagiarism ("presenting, whether intentionally or not, the ideas, expression of ideas or work of others as one's own") will not be tolerated. All ideas, or direct, verbatim quotations, or paraphrased material, or concepts, *must* include proper citation or reference to the original source. Submitted deliverables will be checked for originality. The Department of Health Sciences has a zero-tolerance policy for plagiarism. Academic offences will be reported to the Graduate Advisor and the Faculty of Graduate and Postdoctoral Affairs and may result in failure in the course or removal from the program.

J. Academic Support and Accommodations

As a Carleton student, you'll have access to a variety of Student Support Services to assist you during your time at Carleton both in academic, and non-academic matters. At Carleton, we are committed to enhancing your student experience and to creating an environment that contributes to your success during your time at Carleton and after graduation.

https://carleton.ca/academics/support/

J.1 Support for Graduate Students with disabilities

All students with disabilities taking courses at Carleton University are eligible for academic accommodations and support services through the Paul Mention Centre.
https://carleton.ca/pmc/

J.2 Accommodations

We strongly encourage you to set up your accommodations as soon as possible.

- Attend your first classes to obtain course outlines (or check if they are posted on CU Learn)
- Request your Letters of Accommodation (LoAs):
- *Online:* through the myPMC portal, login or find the "how-to" video here: https://carleton.ca/pmc/students/mypmc/ (if you would like to see your coordinator book an appointment in the upcoming weeks)
- *In Person:* book an appointment with your coordinator by calling the PMC front desk at 613-520-6608

K. Equipment and Facilities in the Health Science Building

The Health Sciences building houses faculty and administrative offices, state of the art labs and research space, secure computing data labs, a dedicated workspace for HSTP students, and lecture halls. Health Sciences is located at 125 Colonel By Drive.

L. Professional Skills Development for Graduate Students

Carleton University offers graduate professional development through Grad Link, a hub for events and opportunities related to professional development, research, and student life, both on and off campus.

https://carleton.ca/gradpd/grad-link/

L.1 Career Services

Career Services at Carleton University offers a number of opportunities for career and networking events, job search supports, training sessions on preparing for interviews, resume and cover letter writing, and much more.

https://carleton.ca/career/

M. Student Wellness Services

M.1 Health Services

Our team of medical professionals including family physicians and registered nurses provide outpatient medical services and serve as primary care providers at Health and Counselling Services https://carleton.ca/health/hours-appointments/

M.2 Counselling Services

Confidential personal counselling services are available for current Carleton University students

https://carleton.ca/health/counselling-services/

M.3 Health Promotion

Our goal is to empower students during various stages of change for healthy living and academic success by offering resources, workshops and activities that cover student health and wellness

https://carleton.ca/health/health-promotion/

M.4 Athletics and Recreation Centre

As a Carleton student you have access to fitness and recreational programming such as the pool, the fitness centre, and a variety of fitness programs.
https://athletics.carleton.ca

Appendices A – Copyright Agreement

Research Conduct and Intellectual Property Agreement

Agreement of Rights and Copyright

Typical of graduate programs, the HSTP MSc involves a research component. This agreement outlines responsibilities, expectations for professional conduct and for intellectual property associated with this research.

The (co)supervisors of HLTH 5504/HLTH 5505 will:

1. Establish relationships with the external partners/stakeholders participating in the projects.
2. Provide supervision and leadership of a graduate-level research project, including the ethics application and research proposal(s), data acquisition and analysis, development of the final report and knowledge dissemination activities, and establishing deadlines.
3. Endeavour to provide students with a broad range of opportunities that are intended to enhance your experience (e.g., learn new skills, disseminate work at conferences)

Students enrolled in HLTH 5504/ HLTH 5505 agree:

1. To be prompt, courteous and respectful of the time and resources being provided by the (co)supervisors, external partners, study participants, and your peers.
2. To act with responsibility and ethical integrity, and to ensure that no sensitive information related to the study is disclosed, including but not limited to: participants', stakeholders' and team members' involvement in the research; data and information derived from the data or related to the project; communications related to the project (including, but not limited to, communications between the group members and supervisor(s)/partner(s), communications involving study participants).
3. To complete the assigned deliverables, including the ethics application, research proposal, final report, and knowledge dissemination activities on schedule and in a professional manner.

Almost invariably research projects are an extension of, or directly related to, ongoing research, or from ideas of the supervisor(s) or collaborators (including affiliated faculty and external partners). As well, the research being undertaken may be supported by resources or grants received by the research supervisor(s), permitting the student to undertake related projects.

In light of these considerations and the fact that the research is being done within the university context, and with the facilities provided by the University, the data plus any associated intellectual property obtained from or derived from these projects will remain the property of the university and of the research supervisor(s). Furthermore, the right to publish or present this material, as well as the right to select the order and inclusion of authors, will be determined by the research supervisor(s),

based on the relative substantive contributions of individuals contributing to the project. The research supervisor(s) will include students in the authorship of publications as appropriate—that is, wherever substantive contributions have been made. Substantive contributions are defined as being involved in major portions of the research and include: the conception and study design, acquiring the data, data analysis and interpretation, drafting the manuscripts or critical revision of manuscript. All authors listed on the manuscript must have read and approved the final version of the manuscript submitted for publication. Similarly, all authors must have read and approved the final version of abstracts, posters and oral presentations submitted for presentation, and be provided the opportunity to comment on the contents of these well in advance of their submission deadlines. The contributions of community collaborators also need to be appropriately acknowledged, at the discretion of the supervisor in discussion with the group.

Section D of the Journal of the American Medical Association authorship agreement provides guidance on the contributions required for authorship, as does the Vancouver Protocol (see Authorship section, page 4):

http://jama.jamanetwork.com/data/ifora-forms/jama/auinst_crit.pdf

http://www.research.mq.edu.au/documents/policies/Vancouver.pdf

Provisional authorship of manuscript(s) should be discussed early, and revised, as appropriate, as the study progresses. If no agreement has been reached before the project is undertaken, it is agreed that the research supervisor(s) will be first and/or last authors (depending on disciplinary norms), and student authorship will be alphabetical thereafter. If the student/researcher's contribution to the final publication is less than that anticipated, or if substantive additional research (including data collection, analyses, and/or writing) is required prior to publication, then the authorship of the publication may be revised by the research supervisor(s). For example, an initial manuscript may be submitted and rejected by a journal and substantive revisions may be required before submitting elsewhere. Under such a scenario, authorship may need to be revised depending on the additional work performed.

If the student/researcher is first author, then it is expected that s/he will take primary responsibility for writing the document for submission for publication (and will take the lead responding to reviewers' comments before resubmission). Should this not be done in a timely fashion (within 6 months of final thesis report submission), then it becomes the prerogative of the research supervisor(s) to write the paper as first author, or assign these duties to a third party as appropriate. However, the research supervisor (or external partner, where necessary) will be corresponding author on all manuscripts, unless otherwise decided by the faculty supervisor. REB protocols submit that ongoing projects must be renewed after one year—data access by team members will be re-evaluated at such intervals.

Paid technicians are *not* entitled to authorship. However, at the discretion of the faculty supervisor, if they contribute substantially to the research (meaning above and beyond simply following directives), then their name may be placed on the written document.

Likewise, in terms of knowledge dissemination activities involving the media, all requests by the student(s) for media/communications should be approved by the supervisor(s) before such requests are made, and the (co)-supervisor(s) must be copied on all correspondence with media contacts. Additionally, the supervisor(s) and community partners must approve what is being published/communicated before going to print or other types of communication media. In all cases, the (co)-supervisors, the Department of Health Sciences, and Carleton University must be cited as the primary institution affiliation (along with partners, if applicable, and if they provide consent to be identified).

By signing this letter, these conditions are agreed to by students and supervisor(s). Should the conditions change (e.g. additional data collection or analysis in order to prepare a manuscript for publication) that stem from the ideas and initiatives of the student(s) or research supervisor(s), then a revised, signed, agreement will be necessary.

Research supervisor(s) (print name(s))_____

Research supervisor(s)
(signature(s))_____

Student (print name)_____

Student (signature)_____

Date_____

Appendix B –Project Guideline

HLTH5505/HLTH5504: HSTP Project Guidelines

Objective

To carry out an interdisciplinary and/or community-engaged health research project that advances our knowledge on a health topic, to be determined in consultation with project supervisor(s) and relevant stakeholders and/or community partner(s).

Deliverables

- Communication strategy and team contract
- A comprehensive literature review of the research topic, done in such a way that it identifies a critically important research gap and provides a rationale for undertaking the project.
- Data collection and/or analyses and interpretation
- A final report (to include study background, rationale, hypothesis, results, conclusions)
- A final presentation to faculty, students, and relevant stakeholders (e.g., community partners)
- Knowledge dissemination products and activities as appropriate.

Course Structure & Expectations

Although HLTH5505/HLTH5504 is a course, it is structured as a graduate-level research project. The students must work together/or directly with their project supervisor(s), who will guide all stages of the project.

Individual and Group Evaluation:

- HLTH5505/HLTH5504 students will be assessed based on their substantive contributions to the project. This includes attendance and participation in group meetings or meeting with supervisor. A letter grade will be assigned based on an individual student basis. To facilitate this evaluation, each group is required to submit a progress report (1-2 pages) on the last day of each month, outlining each group members' contributions over the previous month and challenges encountered. This report should also outline the activities that will occur over the following month.
- The department and faculty organize seminars over the course of the academic year; these seminars provide important insights on conducting research and are often directly relevant to the topics of the projects. Students enrolled in 5502 are expected to attend these seminars.
- The final report will also include a section outlining each student's substantive contributions to the project from its initiation to completion (see final report guidelines for further details).

- The project represents graduate-level research among students who are enrolled in the HSTP on a full-time basis. In order to maintain a reasonable work-life balance, no more than 15 hours per week of outside work is suggested. The HSTP program is expected to be your priority.
- While students are encouraged to publish their findings in peer-reviewed journals and/or present their findings at conferences or community-engagement events, these activities are not part of their formal evaluation. Such publications and presentations, however, must be guided and approved by the supervisor(s) in advance, as well as appropriately acknowledge the supervisor(s), collaborators, Department of Health Sciences, and Carleton University.

Data Security:

- Given that the research is being done within the university context, and with the facilities provided by the University and/or partner, data and any associated intellectual property obtained or derived from these projects will remain the property of the University and of the research supervisor(s).
- It is the students' responsibility to ensure that data are kept confidential and secure. The security and privacy measures in place regarding data access and handling will be determined on a project-by-project basis in consultation with the supervisor and partner, and informed by ethics guidelines.
- The supervisor(s) (and partner, if required) must have, at all times, unrestricted access to all data, derivations of the data, analyses, outputs, and other documents related to the project, for continuity and oversight purposes.
- At all times, in accordance with REB guidelines, supervisors must be able to access all data. Further, upon completion of the project, and before a final grade can be assigned, all data must be turned over to the Department of Health Sciences and data documentation including a data dictionary must be created. At the discretion of the supervisor(s), arrangements may be made for the students to have continued access to the data, as needed on secure workstations within the department, in order to generate a paper for publication or produce data for presentation. Students are also responsible for abiding by the REB procedures for progress and closure reports as relevant.

Communication:

- Supervisors will meet regularly with students as required. Meetings will be scheduled based on the supervisor's availability, and the requirements of the research project. Whenever possible, emails will be answered within 48 hours of receipt (with the exception of weekends/holidays).

Timelines for feedback on deliverables will be decided on by the faculty supervisor in consultation with the students.

- Group members should discuss their ideas and queries together as a group before contacting supervisor(s) to avoid multiple queries on the same topic. Ideally, each group will select one member of their group through which all communication with the external partner(s) will flow.
- Each group will select one member of their research team to communicate via email with the project's external community partners. The supervisor must be copied on all emails to the external partner for continuity. The supervisor and group should determine, ahead of time, whether the group needs to inform the supervisor of their intent to contact the partner prior to doing so. This will avoid unnecessary contact with the external partners and show respect for the partner's time.
- Communications about the project should never be carried out in public forums (such as, but not limited to, Facebook and Twitter). Given the potentially sensitive nature of the data and partnerships, the group must keep security and privacy at the forefront of their minds at all times when discussing the project, data, partners, other group members and previous communications. This also ensures that discussions remain professional and between participants of the project only.
- The point of contact for all media/dissemination should be the supervisor, and the (co)-supervisor(s) must be copied on all correspondence with media contacts. If any media/communications outlet/person contacts the group, they should be directed to the supervisor. All media and dissemination activities must be approved by the supervisor(s) before students make any such requests of media contacts. The supervisor and community partner, if required, must have final approval on all materials, media, and or/dissemination products **prior** to their publication/release/communication. In all cases, the (co)-supervisors, the Department of Health Sciences, and Carleton University must be acknowledged as the primary institution affiliation (along with partners, if applicable, and if they wish to be identified).

Instructional Offences

The University Senate defines plagiarism as "presenting, whether intentional or not, the ideas, expression of ideas or work of others as one's own." This can include:

- reproducing or paraphrasing portions of someone else's published or unpublished material, regardless of the source, and presenting these as one's own without proper citation or reference to the original source;
- submitting a take-home examination, essay, laboratory report or other assignment written, in whole or in part, by someone else;

- using ideas or direct, verbatim quotations, or paraphrased material, concepts, or ideas without appropriate acknowledgment in any academic assignment;
- using another's data or research findings;
- failing to acknowledge sources through the use of proper citations when using another's works and/or failing to use quotation marks;
- handing in "substantially the same piece of work for academic credit more than once without prior written permission of the course instructor in which the submission occurs."

Plagiarism is a serious offence that cannot be resolved directly with the course's instructor. The Associate Deans of the Faculty conduct a rigorous investigation, including an interview with the student, when an instructor suspects a piece of work has been plagiarized. Penalties are not trivial. They range from a mark of zero for the plagiarized work to a final grade of "F" for the course, and even suspension from all studies or expulsion from the University.

Standing in a course is determined by the course instructor subject to the approval of the Faculty Dean.

Appendix C – Group Project Final Report Writing

HLTH5502: HSTP Group Project Report Writing

Final Report Guidelines

The specific style of your final report will be decided upon in consultation with your supervisor(s), and may take the form of a manuscript (in preparation for publication) or thesis; however, it should always include the following sections:

Title

Should be informative and interesting, and concisely capture the objective of the project.

Key Words

5 to 8 key words relevant to the topic under study.

Abstract or Executive Summary

Briefly explain the necessary background, methodology, research findings, and take-home message for a specialist (Abstract) or non-specialist (Executive Summary) readership, to be determined in consultation with project supervisors:

- Stand alone summary of research project in its entirety
- Questions to consider: What did you do? Why did you do it? What were you trying to answer? How did you do it? What are the key findings? What did you learn? Why does it matter? What is the significance? What is next?
- Do not include reference citations in Abstract.
- Maximum 300 words.

Introduction

The introduction should often start by focusing on the "big picture" and provides an overview of the topic being reviewed. The introduction should end with a short paragraph that describes the aim of the review paper and the hypothesis that you will be defending. Please make sure to indicate why the subject is important, and why you are writing about it now:

- Provides a clear, comprehensive summary of relevant literature.
- Gaps in knowledge are clearly described, and how the project fills gap(s) is described.
- Ends with very clear research question(s), rationale, and objectives for study.
- Hypotheses are clearly defined.

Method

The main objective of the Method section is to carefully outline the procedural and measurement information of your study (as applicable):

- Ethics approval statement included and highlights of any relevant processes (e.g., maintaining confidentiality, etc.)
- Methodology is appropriate given the research question(s).
- Sampling procedure and/or sample size calculation and/or rationale for population of study and/or use of existing datasets is appropriate.
- Data collection method including instrument(s) and tools are appropriate.
- Data cleaning/processing methods are adequately described and appropriate.
- Description of statistical or other methods used.
- Description of sample information (e.g., recruitment, demographics, compensation), procedural information, and descriptions of measures/assessment tools (with full measures in appendices)
- Survey instruments should be provided in an appendix.

Results

The Results section should present the findings of your analyses in detail, with specific reference to your research questions and hypotheses:

- Analyses are appropriate given the research question(s).
- Results are clearly described.
- Main analyses are presented in a logical order.
- Results are presented with accurate tables and/or figures when possible; each figure and table should be referenced in the text.
- Supporting data and/or analyses should be presented in an appendix.
- Ensure that no personal identifiable information of participants is presented.

Discussion

The main objective of Discussion section is to interpret the results, "telling the story" of the study in the context of previous research, rather than repeating Results section:

- Discussion of findings follows logical flow, from brief summary of study and arguments that are relevant to the original hypothesis/research question, those that are relevant to the hypothesis but may need further experimentation and/or clarification, and those incidental

results that may not be relevant to the original hypothesis but sufficiently new or interesting to warrant discussing.

- Discussion integrates the current literature, i.e., findings are interpreted in the context of other studies; literature review is not repeated, but rather how findings compare to other studies and some commentary to explain differences/similarities and/or what gaps are filled by the study's findings.
- Limitations are acknowledged and addressed, balanced with the study's strengths, and consistent with the methodology, i.e., small sample size; administration of data collection did not go as planned; discussion of potential biases.
- Practical applications and/or implications, conclusions, and recommendations for further study the field are suggested.

Knowledge Dissemination

- Evidence of knowledge dissemination to stakeholders/community partners/public (e.g., presentations, infographics, etc.).
- Appropriateness for audience and clearly linked to research findings.
- Recommendations for knowledge dissemination implications.

Individuals' Contributions

• Section detailing who contributed to the various aspects of the project and final report, and in what manner, are specified (e.g., who designed the study, prepared or collected data, performed experiments, analyzed data, interpreted results, wrote or edited the final paper?).

Acknowledgements

• Section detailing contributions of external partners, and collaborators to the project

Figures

- Should always have a short, explanatory title to preface the legend.
- Legends must **fully,** but succinctly, explain the figure without reference to the text. This includes a description of any acronyms used, citations where relevant, and other appropriate footnoting.

Tables

- Require a single-sentence title.
- Abbreviations and full explanations should be given in a brief legend to the table.

References

- Please concentrate on seminal references as well as recent papers, including peer reviewed journal articles, government reports, grey literature, etc.
- References must be formatted in accordance with the guidelines set out by your supervisor(s), as per disciplinary norms.
- Whenever possible, reference original materials (rather than other papers that reference the original).

Your written work will be evaluated by your supervisor(s). See below for additional guidelines and tips on your Final Report writing.

Other thesis writing resources:

How to Write A Lot: A Practical Guide to Productive Academic Writing, by Paul Silvia

After describing strategies for writing productively, the author gives advise from the trenches on how to write, submit, revise, and resubmit articles: how to improve writing quality; and how to write and publish academic work.

Theses and dissertations: A guide to planning, research, and writing, by R. Murray Thomas and Dale L. Brubaker

This is a general guide for all disciplines, but is most suitable for students in social and behavioral sciences. The text is organized according to the stages of the research-and-writing process as defined by the authors: preparation, choosing a topic, collecting information, organizing information, interpreting results, and presenting the finished product.

Doing your masters dissertation: Realizing your potential as a social scientist , by Chris Hart

A step-by-step guide particularly for Master's students in the social science. In addition to describing the research and writing process, it also introduces students to key reference sources in social science disciplines.

Guide to writing empirical papers, theses, and dissertations, by G. David Garson

A general guide for students, this text addresses the various stages of writing a paper and includes exercises to help students start writing. Each chapter includes a bibliography. Includes instruction on both primary and secondary research and addresses writing fundamentals.

O'Connor and Holmquist (2009) Algorithm for Writing a Scientific Manuscript. Biochemistry and Molecular Biology Education 37:344–348

Fahy (2008) The basics of writing for publication. Women and Birth 21:86-91

Presents basic skills needed for scientific writing including careful word choices, sentence and paragraph structure. Targeted to individuals in health careers who are not used to writing scientific papers or documents, but principles presented are essential for success in scientific writing in any profession or at any career stage.

Doumont (2009) Trees, maps and theorems. Effective communication for rational minds. Principiae Publishing. http://www.treesmapsandtheorems.com

Moyé (2004) Finding your way in science. Trafford Publishing.

This book discusses principles that guide the character growth and productivity of junior scientists (graduate students and early career investigators). Emphasis is placed on character, compassion and productivity in developing a successful research career.

Moyé (2006) Statistical reasoning in medicine: the intuitive p-value primer. Springer, 2nd ed.

This book helps scientists, health care researchers, health care workers and knowledge users understand basic statistical principles (in biostatistics, epidemiology) in easy to understand, non-mathematical terms. Explanations on how to interpret statistical findings (e.g.: p-values, inference), reasoning processes in clinical studies, and principles of research design are covered.

Nature Methods columns on data visualisation and presentation and achieving clarity in written/graphical communications:

Wong (2011) Points of view: Layout. Nature Methods 8:783

(Using layout to guide readers through complex information and make sense of information).

Wong (2011) Points of view: Salience to relevance. Nature Methods 8:889

(Ensuring readers notice the right content by making relevant information most noticeable).

Wong (2012) Points of view: Visualizing biological data. Nature Methods 9:1131

Wong and Schmidt Kjærgaard (2012) Points of view: Pencil and paper. Nature Methods 9:1037 (Tools to facilitate thinking and hypothesis generation).

Krzywinski and Cairo (2013) Points of view: Storytelling. Nature Methods 10:687

Krzywinski and Wong (2013) Points of view: Plotting symbols. Nature Methods 10:451

Krzywinski (2013) Points of view: Elements of visual style. Nature Methods 10:371

Appendix D - HSTP Practicum Placement FAQ (HLTH 5801)

This practicum supports students in gaining relevant and practical experience through applying course learning at approved organizations. Students are responsible for arranging the placement with an external partner where the practicum will be held, preparing a learning contract, and completing a field-based project deliverable and final report. Students must complete a minimum of 100 hours and a maximum of 150 hours to complete the practicum as well as meeting expectations of the placement supervisor.

What is the purpose of this practicum?

This practicum supports students in gaining relevant and practical experience through applying course learning at approved organizations. Students must complete a minimum of 100 hours and a maximum of 150 hours to complete the practicum as well as meeting expectations of the placement supervisor.

What are the required/requested qualifications of the practicum site supervisor?

A supervisor should be experienced in the area of supervision and be available to mentor the student over the duration of the practicum – including weekly check-ins with the student.

What is the role of the practicum site supervisor?

Site supervisors should be able to mentor students; assist in preparing the learning contract (reviewing/revising what the student has drafted) and agreeing upon a field-based project deliverable at the start of the practicum term; provide a brief interim and final evaluation of the student; contacting HSTP Coordinator to discuss any issues.

How is the student evaluated/what is the role of the supervisor and what is the organization required to submit?

Students are expected to produce an agreed upon field-based project deliverable(s) for the organization. The student is evaluated based on the interim and final evaluation reports and their final report submitted to the HSTP coordinator.

How are practicums arranged?

Students are responsible for arranging the placement themselves with guidance from the HSTP Coordinator. Students must prepare a learning contract, and complete a field- based project deliverable and final report. If a placement occurs at a site where the student already works or volunteers, there must be clear delineation between past work and the proposed deliverable of the placement. Any potential conflicts of interest (such as working with a family member or an organization they already have affiliations with) must be disclosed and addressed with the HSTP Coordinator prior to initiation of placement.

Can organizations request students?

Organizations can send their requests to host an HSTP student to the Graduate Administrator and the details of the practicum placement will be shared with our eligible graduate cohort.

Are there considerations for paid versus unpaid placements?

Students *may or may not* be paid for the work they do on the placement. The required documentation will vary depending on payment status.

Where can the practicum placement take place?

The placement can be with a government organization, NGO, company, or community group that does health, policy, or research work. Examples of possible placement sites can be Health Canada, Canadian Food Inspection Agency, Canada National Institute of the Blind, St. Mary's Home, Hospital Research Institutes, and Ottawa Community Housing. The work done on the placement must be of an academic nature and advance student skill sets; this includes research, intellectual skills development, knowledge translation training, advocacy training and so on.

Are there considerations for paid versus unpaid placements?

Students *may or may not* be paid for the work they do on the placement. The required documentation will vary depending on payment status (students who will not be paid are required to complete the "unpaid placements letter to placement employers" and "unpaid placements student declaration of understanding and agreement" forms).

How many course credits is the placement worth?

HLTH 5801 practicum placement is a half- credit course which is supervised by someone on site at the host organization and overseen by the HSTP Coordinator.

Do I require a learning contract?

Students must co-develop a develop a learning contract aligned with their own interests through which they are able to explore some of the practical implications of what they have learned and are learning. A placement in HSTP offers a unique opportunity for both students and host organizations.

When and how should students search for a placement site?

Students should start looking for a host organization for the placement as early as possible. Students may begin their practicum placement starting in third semester of the program. If a placement occurs at a site where the student already works or volunteers, there must be clear delineation between past work and the proposed deliverable of the placement. Any potential conflicts of interest (such as working with a family member or an organization they already have affiliations with) must be declared and addressed with the HSTP Coordinator prior to initiation of placement.

Who can students consult with about the practicum placement?

Students should consult with the HSTP Coordinator before starting to look for a host organization. The most important thing at this point is to confirm that the type of placement being sought is appropriate and to clarify the expectations of the course and the requirements for the student. Students will need to research organizations that do the kind of work that they are interested in exploring for the practicum placement. The student will need to contact the organizations to determine if they are willing to take a practicum student.

This is an optional course, so the onus is solely on the student to make it happen. Student is responsible for seeking the practicum opportunity and receiving approvals

Creating the Learning Objectives and deliverable(s) of the placement:

Students are responsible for adding their agreed upon learning objectives to the provided course syllabus. The student will be responsible for discussing the project deliverable with the host organization supervisor the tasks that they will be doing in their placement.

Placement Description: basic information describing the placement, including location, placement supervisor and the purpose and goals of the placement as an academic learning experience

Learning Objectives: a list of the knowledge and skills that will be acquired or developed through the placement and clear deliverables for the placement. The syllabus must be approved by the placement supervisor and the faculty supervisor.

Course Registration and Approval Process: Once the student has completed the course syllabus, learning contact and any other necessary paper work from the site organization, the student must send all documents to the HSTP Coordinator (Dr. Francine Darroch) for approval. Upon approval, the documents must be emailed to the Graduate and Departmental Administrator (Claire MacArthur) who will process an override request so that the student can register for HLTH 5801 through Carleton Central. This process must be complete no later than 2 business days prior to the last day registration for the given term (https://carleton.ca/registrar/registration/dates-and-deadlines/)

How is the evaluation for the practicum placement determined?

The faculty supervisor assigns a standard letter grade based on feedback from the site supervisor and completion of the final report.

FOR FURTHER INFORMATION OR ASSISTANCE CONTACT:

Graduate and Departmental Administrator, Claire MacArthur claire.macarthur@carleton.ca or HSTP Coordinator: Dr. Francine Darroch francine.darroch@carleton.ca