CAPSTONE COURSE – RESEARCH ESSAY

2026 / 2027 | DEPARTMENT OF HEALTH SCIENCES | CARLETON UNIVERSITY

[From calendar] Independent critical review and research proposal on a health- related topic, using library, database and/or bioinformatics resources, under the supervision of the course instructor. Seminar topics include identification and critical review of resources, development of scientific writing skills, and formulation of health science-related research. Includes experiential learning activities.

Course Learning Outcomes

1. Critically evaluate the quality, validity, and relevance of primary health research literature.
2. Justify the selection of a research synthesis approach and methodology, for a specified research question, accounting for the strengths and limitations of relevant research methods.
3. Conduct a structured literature synthesis on a health-related topic.
4. Communicate research findings to a specified audience using discipline-appropriate visual, written, and oral techniques.
5. Reflect on and evaluate your own research process, including using peer feedback to improve work.

Course Instructor: Dr. Peters or Paul (preferred)

Background: I am an Associate Professor and lead the Spatial Determinants of Health Lab. Our current projects are on the environmental exposures and youth mental health, geography of rural health, and accessibility of health services using spatial analytic approaches. I am primarily an applied quantitative researcher who uses large administrative datasets.

I'm also a backcountry canoeist, alpine and downhill skier, and father of three.

Email: paul.peters@carleton.ca

Student Hours: Tuesdays, 12:00 – 14:00

Office Location:

Teaching Assistant: TBD

Students are not required to purchase textbooks or other learning materials for this course. Weekly readings will be posted to Brightspace.

Fall Class Schedule

The approach to teaching and learning for this course is built on the principle that the best way to develop skills is to do them. As such, each week is divided into a foundation topic and skills development (in **red**). Below is the *intended* class schedule. For the most recent schedule, please consult Brightspace.

Class #	Date		Topic / Skills	Peer Review
1	Sep	15	Course Objectives; Research Topics	
			Topic Brainstorming	
2		22	Evidence Synthesis	

			From Research Topics to a Question	
3		29	Research Question & Search Session Heather MacDonald, Health Research Librarian	
4	Oct	06	How to Peer Review Citation Management (Zotero)	Research Question
5		13	Critically Evaluating Research Critical Reading	
6		20	Open Science & Protocol Development Open Science Foundation	
			Fall Break	
7	Nov	03	Review Reporting Standards PRISMA-Scr & Others	Critical Evaluation
8		10	Research Ethics AI Research Methods	
9		17	Knowledge Mobilization Target Journal Selection	
10		24	Advanced Writing AI as an Editor	
11	Dec	01	Open TA Consultation (Instructor Away)	
12		08	Term Summary Peer Review of Protocols	Research Protocol

Winter Class Schedule

Below is the *intended* class schedule, please consult Brightspace for updates.

Week #	Date		Topic / Skills	Peer Review
1	Jan	12	Screening & Study Selection Screening Calibration	
2		19	Data Extraction & Form Extraction Pilot	
3		26	Thematic Analysis Identifying Themes	Evidence Synthesis
4	Feb	02	In-Office Consultation	

5		09	Visualizing Evidence Systematic Mapping Tools	
			Spring Break	
6		23	Appraising Evidence Apply Appraisal Checklists	
7	Mar	02	In-Office Consultations	
8		09	Effective Presentations Peer Lightning Talks	Presentations
9		16	In-Office Consultations	
10		23	Presentations	
11		30	Presentations	
12	Apr	6	Presentations Peer Review of Final Paper	

Assignments & Grading

The core of this class is a scaffolded **capstone research project.** The format of this project is open and can include the development of a structured literature review, rapid review, methodological review, or a secondary data-focussed research paper. Topics will be selected based on your research interests and can be related to core science research, public health, health policy, or professional practice. You are encouraged to work on something related to your future educational or career goals.

Component	Description	Peer Review	Due Date	Grade Value
Participation	In-class activities or self-reflections (16 of 20 activities are included in grade)	-	-	20
Research Question	Research question	Oct 6	Oct 13	5
Critical Evaluation	Critical evaluation of research gap	Nov 3	Nov 10	10
Research Protocol	Formal project protocol	Dec 8	Dec 15	10
Evidence Synthesis	Theme identification; synthesis of evidence	Jan 26	Feb 2	10
Visualization	Data visualization; poster, infographic	-	Mar 2	5
Presentation	Presentation of final project	Mar 9	Mar 23, 30	10
Final Capstone	Final capstone research essay	Apr 6	Apr 23	30

Assignments, including the final project, have two due dates: draft and final. A **printed** draft is due in-class and will be used for peer-review. The assignment due date will usually be 1 week after peer review.

Details for marking will be provided for each assignment.

Peer Review, Assignment Revisions, and Self-Reflection

Peer review is built into the rubric for each component of your capstone project. For each course component, a portion of the mark will be based on the peer review you provide your classmates

The participation component is based on attendance for in-class activities & submitted self-reflection based on these activities.

Course Policies

Academic Accommodations

Carleton is committed to providing academic accessibility for all individuals. You may need special arrangements to meet your academic obligations during the term. The accommodation request processes, including information about the Academic Consideration Policy for Students in Medical and Other Extenuating Circumstances, are outlined on the Academic Accommodations website (students.carleton.ca/course-outline).

Requests for extensions fall into two categories:

Short-term consideration (< 5 days)

1. Complete the Academic Consideration for Coursework Form https://carleton.ca/registrar/academic-consideration-coursework-form/
2. Contact myself and the TA via email within 24 hours

Long-term consideration (> 5 days)

1. Complete the Long-Term Academic Consideration Request Form https://carleton.ca/registrar/academic-consideration-coursework-form/
2. Contact myself and the TA via email within 24 hours

Students who don't submit a request for consideration will receive a 50% deduction if submitted within 5 days and will receive a 0 mark if submitted after 5 days.

Academic Integrity

Students are expected to uphold the values of academic integrity, which include fairness, honesty, trust, and responsibility. Examples of actions that that compromise these values include but are not limited to plagiarism, accessing unauthorized sites for assignments or tests, unauthorized collaboration on assignments or exams, and using Generative Artificial Intelligence (GenAI) tools when course assessment instructions indicate such use is not permitted.

Misconduct in scholarly activity will not be tolerated and will result in consequences as outlined in Carleton University's Academic Integrity Policy. A list of standard sanctions in the Faculty of Science can be found here.

Additional details about this process can be found on the Faculty of Science Academic Integrity website.

Students are expected to familiarize themselves with and abide by Carleton University's Academic Integrity Policy.

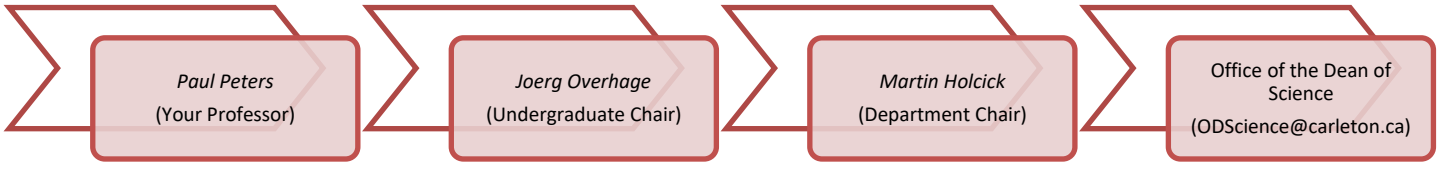
Student Rights & Responsibilities

Students are expected to act responsibly and engage respectfully with other students and members of the Carleton and the broader community. See the 7 Rights and Responsibilities Policy for details regarding the expectations of non-academic behaviour of students. Those who participate with another student in the commission of an infraction of this Policy will also be held liable for their actions.

Student Concerns

If a concern arises regarding this course, **your first point of contact is me**: Email or drop in during student hours and I will do my best to address your concern. If I am unable to address your concern, the next points of contact are (in this order):

Note: You can also bring your concerns to Ombuds services.



Final Grades

Standing in a course is determined by the course instructor subject to the approval of the Faculty Dean. This means that grades submitted by the instructor may be subject to revision. No grades are final until they have been approved by the Dean.

Grading

Grade	Percentage Conversion	Grade	Percentage Conversion
A+	90 – 100	C	63 – 66
A	85 – 89	C-	60 – 62
A-	80 – 84	D+	57 – 59
B+	77 – 79	D	53 – 56
B	73 – 76	D-	50 – 52
B-	70 – 72	F	< 50
C+	67 – 69		

* *Final grades are not scaled.*

Artificial Intelligence Tools

As our understanding of the uses of GenAI and its relationship to student work and academic integrity continue to evolve, students are required to discuss their use of GenAI in any circumstance not described here with the course instructor to ensure it supports the learning goals for the course.

The use of AI tools in this course will vary depending on the assessment or activity. I have adopted a use formula (developed by Teaching & Learning Services) that has 3 levels of acceptable use. Regardless of how AI is integrated into your work, it **must** be documented or referenced.

1) AI use Prohibited

- For these activities and assignments, you may not use generative AI tools to develop, draft, analyse, or generate any part of your submission. Your submission should represent your own work and thinking.

2) Permitted with Restrictions

- AI tools can be used for specified preparatory purposes such as brainstorming or identifying possible questions. You must disclose any AI use and briefly explain how you used the tool and how you evaluated or revised its output. The submitted work must demonstrate your own understanding of the course material.

3) Integrated Use

- These assessments ask you to work with AI-generated material as part of the learning activity. You are responsible for evaluating the output, identifying limitations or inaccuracies, connecting your analysis to course concepts, and explaining your decisions.