

TEACHING DOSSIER

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This dossier presents my teaching approach, the courses I have taught, and evidence of their effectiveness. Since 2021, I have taught undergraduate and graduate courses in in-person and online formats, both synchronous and asynchronous, at the School of Health and Life Sciences at Conestoga College Institute of Technology and Advanced Learning; the School of Public Health Sciences, Faculty of Health, at the University of Waterloo; and the Schulich School of Business at York University. My students are primarily health professionals, including physicians, nurses, dentists, pharmacists, and allied health professionals, as well as aspiring health leaders. In addition, the student cohort comprises both domestic students and international students from India, Nigeria, China, and Mexico. This diverse student population informs nearly every instructional decision I make.

1. Teaching Philosophy

I teach health professionals to make more informed, evidence-based decisions. Most of my students will not become researchers; they will become managers, analysts, clinicians, and executives who must assess budget variances, forecasts, or policy proposals, often under time constraints. My goal is for them to leave able to ask the right questions of the data, interpret the findings critically, and communicate them clearly to the decision-maker. Above all, I want every student to return to the workforce with greater confidence, equipped with practical tools they can apply in their roles and that enhance their competitiveness in a demanding labour market. This goal is rooted in my own career. Two decades in hospital and health-authority leadership have shown me how often sound decisions depend on someone translating analysis into plain language, while my doctoral training in health economics and epidemiology has shown me how easily a plausible figure can mislead.

I organize most units around four stages, which I call the Iterative Systems Framework. This framework follows the experiential learning cycle, in which students progress from personal experience to reflection, conceptual understanding, and application (Kolb, 1984).

1.1 Iterative Systems Framework

- **Self-reflection.** I begin by inviting students to consider their own experiences. When teaching access to care, I first ask why they most recently chose an emergency department rather than a walk-in clinic. Their responses reveal barriers related to time, distance, cost, and information, factors that the theory subsequently names.
- **Theoretical critique.** We then distinguish potential access from realized access, or utilization. A service that is free at the point of care is not equally accessible if a rural patient must travel for hours while an urban patient does not (Levesque, Harris and Russell, 2013). This distinction is central to my research and provides students with a framework they can apply to nearly any program or policy (Chiarot *et al.*, 2025).
- **Empirical application.** Students then quantify the issues discussed by analyzing real health data. I tailor the methods to the course, including descriptive statistics, maps, and well-designed figures for managers, as well as regression and time-series models when appropriate to the program (Chiarot *et al.*, 2026).

- **System change.** Finally, students make decisions. They identify supply-side constraints, such as facilities, workforce, and medicines, alongside demand-side barriers, such as financial, geographic, and social factors, and recommend a course of action to a defined audience.

1.2 Application of the Framework

- **Rigour made accessible.** Quantitative material can be overwhelming for students from clinical or management backgrounds. I reduce unnecessary cognitive load by providing worked examples, code, fill-in lecture notes, and frequent low-stakes quizzes, enabling students to focus on interpretation rather than syntax or memorization (Sweller, 1988).
- **Alignment.** Each assessment is linked to a stated learning outcome, and each rubric clarifies in advance what constitutes a strong response (Biggs, 1996).
- **Executive communication.** I expect written work to meet the standard of a briefing note: present the key conclusion first, use clear headings, and include figures that non-technical readers can readily understand. Students practise defending their analyses before their peers, as they may later do before a board or ministry.
- **Respect.** Students learn challenging material most effectively when they feel comfortable asking questions. I respond to messages promptly and check in with students about their progress.
- **Equity, inside and outside the classroom.** I believe everyone interested in and capable of learning should have access to higher education. Although I cannot remove every barrier students face outside the classroom, I can avoid creating additional ones. I therefore treat accessibility as a design consideration: if a student cannot use a learning activity, I adapt it (Section 6).

2. Teaching Responsibilities

Table 1 lists the courses for which I have served as the instructor of record. I have also supported instruction as a teaching assistant, instructional aide, and guest lecturer, as detailed below.

Course	Institution & Program	Level & Format	Term(s)	Enrolled
Value and Quality in Healthcare (MHIA 6160)	Schulich School of Business, York University; Master of Health Industry Administration	Graduate; in person	Winter 2027 (2 sections)	90 (45 per section)
Public Health and the Environment (HLTH 604)	University of Waterloo; Master of Public Health	Graduate; online, asynchronous	Winter 2026	69
Health Economics and Public Health (HLTH 632)	University of Waterloo; Master of Public Health	Graduate; online, asynchronous	Fall 2024	33
Financial Practices for Health Care Organizations (FIN8230)	Conestoga College, School of Health & Life Sciences	Undergraduate; in person	Fall 2021 to Fall 2023	33 to 41 (per term)
Engaging Collaboration in Health Care Management (MGMT8165)	Conestoga College, School of Health & Life Sciences	Undergraduate; in person	Winter 2024	37

Course	Institution & Program	Level & Format	Term(s)	Enrolled
Entrepreneurship in Health Care (ENTR8260)	Conestoga College, School of Health & Life Sciences	Undergraduate; in person	Spring 2024	37

Table 1. Courses taught as instructor of record. HLTH 604 and HLTH 632 are asynchronous courses designed by other faculty members, which I delivered. Conestoga enrolment is the number of students invited to the Early Course Check-in.

2.1 Instruction Support

- **Teaching support.** Teaching Assistant, Faculty of Health, University of Waterloo (2021 to 2023), for two graduate courses, Applied Machine Learning and Artificial Intelligence in Public Health (HLTH 650) and Quantitative Methods and Analysis (HLTH 605B), and four undergraduate courses: Global Health (HLTH 401), The Wicked Problem of Climate Change (HLTH 473), Social Determinants of Health (HLTH 260), and An Introduction to Health Neuroscience (HLTH 290). Instructional Aide through AccessAbility Services for HLTH 605B (Fall 2023).
- **Guest lectures.** “From Patient to Population: Rethinking the Health System” at the Faculty of Health, University of Waterloo, and the Schulich School of Business (2026); “Global Health: The Concept of Access” in HLTH 620 (graduate) and HLTH 290 (2023); and “Achieving Health System Resilience: An Econosyndemic Approach” in HLTH 290 (2022).

3. Course Design and Curriculum Innovation

3.1 Value and Quality in Healthcare (MHIA 6160), Schulich School of Business

MHIA 6160 is a newly developed six-week, 1.5-credit graduate course for the Master of Health Industry Administration program, with its first offering scheduled for Winter 2027. I developed the learning outcomes, modules, reading list, assessments, rubrics, and all lecture and laboratory materials. The course is grounded in three design choices.

- **A dual lens.** Each module examines the material through a System Lens (the public sector: equity, the Canada Health Act, regulation, and population health) and an Industry Lens (the private sector: efficiency, technological innovation, fiscal sustainability, and competition). Because MHIA graduates work at the intersection of these sectors, the course asks them to consider both perspectives in every decision.
- **Code-along R laboratories.** The course introduces R but is not a programming course; its objective is to develop data literacy among leaders. In weekly laboratories, students use provided scripts, adjust parameters, and interpret the output, enabling them to lead technical teams without becoming programmers themselves. R and RStudio are free, open-source software, so students incur no software costs.
- **A simulation capstone.** Working as a Health System Taskforce, student groups respond to a simulated emerging epidemic using DAEDALUS, an open-access model developed by the Jameel Institute at Imperial College London that estimates trade-offs between health outcomes and economic activity (Haw *et al.*, 2022). Students are introduced to the model in Week 3, experiment with it in Week 4, and then present a written brief and a ten-minute pitch to a mock national cabinet, followed by ten minutes of questions.

The assessments build toward the capstone (Table 2). Every written deliverable follows an Executive Briefing Standard, and every major assessment has a published rubric.

Assessment	Weight	Week	What students produce
Reading quizzes (individual)	15%	2, 3, 4	Three 20-minute quizzes on the assigned readings
Case analysis (individual)	30%	3	A 1,000-word professional report on value and quality in a health system
R visualizations (individual)	15%	4	Two figures, or a figure and a table, each with a 200-word “so what” for decision-makers
Capstone brief (group)	20%	5	A 2,000 to 2,500-word executive report using DAEDALUS evidence
Capstone summit (group)	20%	6	A 10-minute pitch and 10-minute question period

Table 2. MHIA 6160 assessment design (Winter 2027 course outline, Appendix A).

3.2 Financial Practices for Health Care Organizations, Conestoga College

Most Financial Practices for Health Care Organizations (FIN8230) students came from clinical backgrounds and had limited training in finance or accounting, a concern they raised during my first term. Within the College’s assessment structure, I introduced executive cases drawn from my hospital finance experience, including budget variances and capital requests, and asked students to recommend a course of action from a manager’s perspective. Students repeatedly described the weekly quizzes as useful reviews of the material.

From December 2023 to January 2024, the College engaged me as a subject-matter expert to support the redevelopment of FIN8230 into FIN8231. Drawing on feedback from full-time faculty and capstone instructors, a survey of finance faculty, and the program review, I evaluated each proposed topic in relation to the existing curriculum, recommended revised course and unit outcomes, and proposed new applied assessments: a personal budget; a project budget accompanied by a written justification for each line item; and percent-variance analysis, which managers use to review budgets containing hundreds of line items. I also provided guidance on scope, for example, noting that forecasting would require at least half of a three-hour lecture, and on terminology that might confuse students, such as the differing meanings of “public” and “private.”

4. Evidence of Teaching Effectiveness

4.1 Conestoga College: Early Course Check-in

Conestoga surveyed students at midterm through its Early Course Check-in, the only student survey administered for these courses. The College designed the survey to provide formative feedback, enabling instructors to adjust while the courses were still in progress. Table 3 compares my results with the College-wide average for the same term.

Term	Course	Responses	Learning (/5)	College (/5)	Teaching (/4)	College (/4)
Fall 2021	FIN8230	26 of 40	4.08	4.06	3.69	3.69
Winter 2022	FIN8230	21 of 38	4.43	4.09	3.91	3.69
Spring 2022	FIN8230	29 of 33	4.28	4.15	3.90	3.72

Term	Course	Responses	Learning (/5)	College (/5)	Teaching (/4)	College (/4)
Winter 2023	FIN8230	28 of 41	4.54	4.21	3.82	3.66
Spring 2023	FIN8230	26 of 39	4.38	4.28	3.77	3.70
Fall 2023	FIN8230	24 of 38	4.58	4.26	3.87	3.70
Winter 2024	MGMT8165	16 of 37	4.19	4.29	3.89	3.71
Spring 2024	ENTR8260	13 of 37	4.69	4.33	3.98	3.75

Table 3. Learning item: “Overall, I feel I am learning and understanding the subject material in this class” (5 = strongly agree). Teaching items: mean of all rated instructor items in that term’s report, such as organization, clarity, feedback, respect, and encouraging participation (4 = always). College: Conestoga average for the same items and term. Full reports in Appendix D.

Students’ perceptions of their learning were above the College average in seven of the eight terms, and my teaching-item scores met or exceeded the College average in every term. In Spring 2024, all respondents agreed or strongly agreed that they were learning and understanding the material. Response rates were typical for a mid-term survey, ranging from 35% to 88%; accordingly, I interpret these results as consistent indicators rather than precise measurements.

4.2 University of Waterloo: Student Course Perceptions

Course	Enrolled	Responses	Overall (/5)	Implement (/5)	Design (/5)
HLTH 632, Fall 2024	33	7 (21%)	3.7	3.5	3.9
HLTH 604, Winter 2026 (weekly live office hours added)	69	10 (14.5%)	4.5	4.5	4.5

Table 4. End-of-term Student Course Perceptions (SCP) surveys. Implementation (Implement) and Design are the means of the instructor-delivery and course-design questions; Overall is the mean of both. Full reports in Appendix C.

Response rates in both courses were low, so I read these figures with caution. Section 5 describes the changes made between the two courses.

4.3 What students said

The following comments are quoted verbatim from the surveys above. I selected them because they reflect the commitments articulated in my philosophy.

“Though it is a tough subject to deal with, my professor teaches all the complex concepts in an easy manner with appropriate examples. The weekly quizzes are really helpful.” (FIN8230, Fall 2021)

“I love how he incorporates previous work experiences to better understand the course concept.” (FIN8230, Winter 2022)

“The professor is a very thoughtful person who puts a lot of thought into how he presents the material. His lessons were engaging and useful, and he was very patient with everyone in class always encouraging students to try their best.” (FIN8230, Spring 2022)

“Always incredibly considerate, understanding, and helpful, and you genuinely care about your work and your pupils! ... I appreciate you asking how things are doing a lot since I know how difficult school can be.” (FIN8230, Winter 2023)

“Great professor, and fully educated in the subject and course material. He’s able to share the content with passion and provide practical examples with the real-life workforce.” (FIN8230, Spring 2023)

“His commitment to student development is evident through his efforts to make lectures extremely collaborative and engaging. He never fails to provide feedback after every assignment and makes sure we have a thorough understanding of what is expected from us in the assignments.” (MGMT8165, Winter 2024)

“The instructor was great at responding quickly to emails and addressing concerns effectively.” (HLTH 632, Fall 2024)

“I found the formulas hard similar to stats but this course was done in a manner that made sense and I appreciated the live/recorded office hours you held weekly.” (HLTH 604, Winter 2026)

4.4 Recognition

I received the Faculty of Health Teaching Assistant Award at the University of Waterloo as the Spring 2022 recipient. The Faculty’s Teaching Fellows grant this award based on nominations from course instructors and students.

5. Responding to Student Feedback

I treat student feedback as data, and two examples show how I have acted on it.

- **Clarity of expectations (FIN8230).** I first taught FIN8230 in Fall 2021, when the pandemic had moved Conestoga’s courses to synchronous online delivery. Finance was already a subject that many students approached with reluctance, and teaching it through a screen was challenging. Students told me that the assignment instructions were insufficiently clear and that the course was difficult to follow without a finance background. Clarity was my lowest-rated item that term (3.41 out of 4, compared with the College average of 3.61). In Winter 2022, the course returned to the classroom, and I taught it a second time; students rated the clarity of instruction at 3.95, compared with a College average of 3.78. I cannot distinguish the effects of returning to in-person teaching from those of my increased experience, and both likely contributed. The lesson I drew from that first term has stayed with me: students without a quantitative background need expectations to be outlined early and explicitly, and they need to see the material applied to settings they recognize.
- **Live contact in asynchronous courses (HLTH 632 to HLTH 604).** Both of my Waterloo courses were asynchronous and designed by other faculty members. Professor Sue Horton developed HLTH 632 and recommended me to teach it after her retirement; the recorded lectures were hers, and my role was to run the course, answer questions, and assess student work. Students rated the course design well (3.9 of 5), but their lowest ratings concerned delivery, and they asked for live sessions. When I taught HLTH 604, I added weekly live office hours and recorded them for students who could not attend. The course received 4.5 out of 5 on every summary measure, and a student singled out the weekly office hours as something that helped them learn. These are different courses with few respondents, so I do not claim a causal link, but the feedback suggests the change mattered.

6. Inclusive and Accessible Teaching

I view accessibility as an engineering challenge rather than a policy statement. In Fall 2023, I served as an Instructional Aide through AccessAbility Services, supporting a graduate student with a visual impairment in Quantitative Methods and Analysis (HLTH 605B). Because screen-

reading software could not adequately interpret output in the RStudio console, I developed what I call a *Visual Guide Protocol*: weekly synchronous sessions during which I narrated code and console output line by line, providing an auditory alternative to a visual data environment. This enabled the student to complete the same technical work as their peers.

This approach also informs my course design. I select free, open-source software and open-access tools to ensure that cost is not a barrier; record office hours for students who work or provide family care; provide structured notes with space for practice; and use frequent, low-stakes assessments so that a single difficult day does not determine a student's grade. My training in supporting student mental health, including the More Feet on the Ground certificate, helps me recognize when a student may be struggling and connect them with appropriate support.

7. Supervision and Mentorship

From 2022 to 2025, I supervised and mentored three Master of Science (MSc) graduate research assistants in the School of Public Health Sciences at the University of Waterloo. I supported them in formulating research questions, selecting appropriate statistical methods, conducting analyses, and translating findings into concise policy briefs for health organizations. My aim is to develop researchers who can both model health outcomes and clearly explain the implications of their findings for program managers.

8. Professional Development in Teaching

- **Centre for Teaching Excellence, University of Waterloo (2021 to 2022):** Teaching Online Basic Skills; Giving and Receiving Feedback; Supporting Student Mental Health, with the More Feet on the Ground certificate; and Effective Lesson Plans.
- **Fundamentals of University Teaching, University of Waterloo (2021 to 2022):** first program module (Instruction).
- **Teaching at Conestoga micro-credential, Conestoga College (December 2021):** four six-hour modules: Understanding Outcomes-Based Education and Curriculum; Active Learning Leading to Assessment; Learning Management System and Technologies for Teaching; and Teaching and Services at Conestoga.
- **Accessibility Training Course, University of Waterloo (2021).**

9. Educational Leadership and Future Directions

9.1 Academic service

From 2022 to 2023, I served as the Graduate Student Representative on the School Advisory Committee on Appointments in the School of Public Health Sciences at the University of Waterloo. The committee evaluated candidates for an Assistant Professor position in Health Informatics. This experience provided me with valuable insight into how a school assesses teaching and research excellence during the hiring process.

9.2 Scholarship of teaching and learning

I have developed a proposal to evaluate the MHIA 6160 design through a mixed-methods study. The study would measure students' anxiety about quantitative methods and their self-efficacy at three points during the term, compare their performance on matched tasks before and after the code-along laboratories, and analyze their reflections on the DAEDALUS capstone. I have discussed the project with the MHIA program director and my collaborator at Imperial College London. My initial step is to prepare an article describing the dual-lens design and the use of

DAEDALUS in management education, which I intend to use as the foundation for a small grant application.

9.3 Teaching goals

Over the next three years, my teaching goals are:

- to teach the first offering of MHIA 6160, gather mid-course feedback as I did at Conestoga, and revise the course for its second year;
- to publish the course design and, with funding, evaluate it formally;
- to bring the code-along approach to other courses in which quantitative methods are a barrier for students, such as health economics; and
- to contribute to wider access to higher education beyond my own classroom, for example by sharing my open-source course materials and mentoring students who are new to graduate study.

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Appendices

Appendix A. MHIA 6160 course outline, Winter 2027.

Appendix B. Sample teaching materials: MHIA 6160 Week 3 R lecture and R laboratory.

Appendix C. University of Waterloo Student Course Perceptions reports.

Appendix D. Conestoga College Early Course Check-in reports.

Appendix E. Course outlines: HLTH 604, HLTH 632, FIN8230, MGMT8165, and ENTR8260.

Appendix F.

- Faculty of Health Teaching Assistant Award (Dean's Update, February 2023);
- Teaching at Conestoga micro-credential; and
- University of Waterloo Accessibility Training certificate

Note: Appendix pages follow this document and are numbered by appendix (for example, A-1) and are available upon request.