

Business C710
Health Economics and Evaluation
Winter 2024 Course Outline

Health Policy and Management Area
DeGroote School of Business
McMaster University

COURSE OBJECTIVE

DeGroote’s MBA specialization in Health Services Management (HSM) is the only one of its kind in Canada. Industry leaders and alumni agree that one of the most valuable courses offered has been the health economics/evaluation course that has appeared in the calendar under various names over the years. This course will examine the application of economic principles to policy-relevant questions in the area of health and healthcare.

INSTRUCTOR AND CONTACT INFORMATION

Thurs 2:30pm – 5:20pm

Teaching Assistant

Instructor

Christopher J. Longo, PhD.

cjlongo@mcmaster.ca

Office: RJC 422

Office Hours: Tues 2:30 – 4:00pm

Tel: (905) 525-9140 x23896

Tuhin Maity

maityt@mcmaster.ca

Office: NA

Course Website: <http://www.degroote.mcmaster.ca>

COURSE ELEMENTS

Credit Value:	3	Leadership:	Yes	IT skills:	No	Global view:	Yes
Avenue:	Yes	Ethics:	No	Numeracy:	Yes	Written skills:	Yes
Participation:	Yes	Innovation:	Yes	Group work:	Yes	Oral skills:	Yes

COURSE DESCRIPTION

This course will be taught using lectures, guest speakers, discussions, research projects and presentations and a minimum of one lecture via Avenue to Learn (hybrid course design). Lectures will not attempt to cover all the possible materials, but will provide a starting place for class discussion. Some of the class time will be used to engage in activities designed to illustrate certain topics and issues and to provide a basis for their discussion.

LEARNING OUTCOMES

This course will examine the application of economic principles to policy-relevant questions in the areas of health and healthcare. Topics may include but not be limited to applied health economics, demand and supply of healthcare and insurance, economic evaluation of health technologies and programs (pharmaceuticals, devices, etc), cost-effectiveness, cost-utility and cost-benefit analyses, and means by which to improve value-for-money in the health sector.

REQUIRED COURSE MATERIALS AND READINGS

Avenue registration for course content, readings and case materials	
• http://avenue.mcmaster.ca	\$ FREE
M. Drummond, et al, Methods for the Economic Evaluation of Health Care Programmes, 4 th edition”, Oxford Medical Publications (2015)	\$ 76.00
• purchase a copy at the bookstore or e-book (slightly lower cost)	
Custom Courseware	
• Available via e-Reserves in A2L	\$ 0

OPTIONAL COURSE MATERIALS AND READINGS

None

EVALUATION

Learning in this course results to a large degree from in-class discussion and participation of comprehensive economic evaluation lectures and cases as well as out-of-class analysis. The balance of the learning results from related readings, and from researching your presentations, and projects. Work will be evaluated on both an individual and group basis. In group work members will share the same grade adjusted by peer evaluation. Your final grade will be calculated as follows:

Components and Weights

Budget Impact Analysis (BIA)	Completed using an Excel template that will be provided in A2L and introduced in class.	15%
Brief critique	Based on recent health economics literature	15%
Class participation	Lecture/Discussion time	15%
Term Project	Presentation (In person/via Zoom)	15%
Term Project	Report	40%
Total		100%

Conversion

At the end of the course your overall percentage grade will be converted to your letter grade in accordance with the following conversion scheme.

Grade (Points)	Percentages
A+ (12)	90-100
A (11)	85-89
A- (10)	80-84
B+ (9)	75-79
B (8)	70-74
B- (7)	60-69
F (0)	00-59

Health Research Methodology/E Health/ Global Health Graduate Students

At the end of the course HRM students' overall percentage grade will be converted to a letter grade in accordance with the following conversion scheme.

Grade	Percentages
A+	90-100
A	85-89
A-	80-84
B+	77-79
B	73-76
B-	70-72
F	Failure, inadequate work

COURSE DELIVERABLES

Budget Impact Analysis (BIA)

This is a hands-on assignment that will be illustrated in class using an Excel file with some portions of it pre-loaded. It is worth **15%** of your final grade and is due on **February 8th** at 2:30pm.

Mid term critique

This critique, is worth **15%** of your final grade and will be marked individually (if class size exceeds 32 students, students can opt to do the critique in pairs). The critique will be due on **Sunday February 25th**. A full description of expected format will be provided on or before the second week of classes.

Team Project – Presentation

There is a team presentation in this course that accounts for **15%** of your final grade. The presentation should cover the material included in your report, but be limited to 30-45 minutes with an additional 15 minutes for questions (some variation in length of presentation based on class size may occur). Group size will be dependant on class size but will likely be groups of 5.

Team Project – Written report

There is a major team report in this course that accounts for **40%** of your grade. This report should be based on an incremental analysis of a new technology or program with respect to existing treatments or practices. The scope of this report should be discussed with the instructor before proceeding, and must have a well defined and measurable outcome measure. You will be responsible for:

- Identifying a health economics issue with alternative interventions
- Conducting **an economic evaluation** of competing interventions using one of the comparative techniques identified in the *Drummond* text but limited to one of:
 - Cost effectiveness analysis
 - Cost-utility analysis
 - Cost-benefit analysis
- Making appropriate recommendations based on this analysis.

Students should attempt to form groups early in the term and are required to provide an outline of their project by **February 29th**. The instructor will review the project for content and feasibility for the course, and provide appropriate feedback and guidance.

Your written research project is due the last Friday of classes for C710 (April 12th).

Participation

Zoom virtual classes will provide the opportunity to discuss class materials and will be used to help give credit for your participation (worth **15%** of your grade). You must identify yourself when addressing the class with your **full first and last name** clearly stated you for every class.

Two in-class case studies applying health economic principles and requiring some rudimentary calculations will be handed out during the term (via A2L). They will be discussed in class and

your final results will be handed in at the end of specified classes, and will constitute 20% of your participation mark.

Instructors will feel free to **cold-call** on anyone at any time. Hence, it is imperative that you prepare for each and every class and reading. In general, contributions are evaluated in an ascending order from physically but not mentally present, to good chip shots, to quite substantial comments, to case cracking contributions. Debate and challenge are important activities that help in the learning process and the willingness of individuals to engage in such activities with their classmates is appreciated. However, using **air-time** involves an obligation to actually contribute. None of us has time for recitation of case facts, bland summaries of prior discussion, and so on, that are devoid of implications. Before you speak, always answer the question **so-what?** Participation will **NOT** be graded by counting each contribution a student makes. Participation will be graded by examining the quality of contributions in each class.

COMMUNICATION AND FEEDBACK

Students that are uncomfortable in directly approaching an instructor regarding a course concern may send a confidential and anonymous email to the respective Area Chair or Associate Dean:

<http://mbastudent.degroote.mcmaster.ca/contact/anonymous/>

Students who wish to correspond with instructors or TAs directly via email must send messages that originate from their official McMaster University email account. This protects the confidentiality and sensitivity of information as well as confirms the identity of the student. Emails regarding course issues should **NOT** be sent to the Administrative Assistant.

Instructors are encouraged to conduct an informal course review with students by Week #4 to allow time for modifications in curriculum delivery. Instructors should provide evaluation feedback for at least 10% of the final grade to students prior to Week #8 in the term.

ACADEMIC INTEGRITY

You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity.

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: “Grade of F assigned for academic dishonesty”), and/or suspension or expulsion from the university.

It is your responsibility to understand what constitutes academic dishonesty. For information on the various types of academic dishonesty please refer to the Academic Integrity Policy, located at:

www.mcmaster.ca/academicintegrity

The following illustrates only three forms of academic dishonesty:

1. Plagiarism, e.g. the submission of work that is not one's own or for which other credit has been obtained.
2. Improper collaboration in group work.
3. Copying or using unauthorized aids in tests and examinations

AUTHENTICITY/PLAGIARISM DETECTION

Some courses may use a web-based service (Turnitin.com) to reveal authenticity and ownership of student submitted work. For courses using such software, students will be expected to submit their work electronically either directly to Turnitin.com or via an online learning platform (e.g. A2L, etc.) using plagiarism detection (a service supported by Turnitin.com) so it can be checked for academic dishonesty.

Students who do not wish their work to be submitted through the plagiarism detection software must inform the Instructor before the assignment is due. No penalty will be assigned to a student who does not submit work to the plagiarism detection software.

All submitted work is subject to normal verification that standards of academic integrity have been upheld (e.g., on-line search, other software, etc.). For more details about McMaster's use of Turnitin.com please go to www.mcmaster.ca/academicintegrity.

COURSES WITH AN ON-LINE ELEMENT

Some courses may use on-line elements (e.g. e-mail, Avenue to Learn (A2L), LearnLink, web pages, capa, Moodle, ThinkingCap, etc.). Students should be aware that, when they access the electronic components of a course using these elements, private information such as first and last names, user names for the McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course.

The available information is dependent on the technology used. Continuation in a course that uses on-line elements will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure, please discuss this with the course instructor.

ON-LINE PROCTORING

Some courses may use online proctoring software for tests and exams. This software may require students to turn on their video camera, present identification, monitor and record their computer activities, and/or lock/restrict their browser or other applications/software during tests or exams. This software may be required to be installed before the test/exam begins.

CONDUCT EXPECTATIONS

As a McMaster student, you have the right to experience, and the responsibility to demonstrate, respectful and dignified interactions within all of our living, learning and working communities. These expectations are described in the [Code of Student Rights & Responsibilities](#) (the “Code”). All students share the responsibility of maintaining a positive environment for the academic and personal growth of all McMaster community members, **whether in person or online.**

It is essential that students be mindful of their interactions online, as the Code remains in effect in virtual learning environments. The Code applies to any interactions that adversely affect, disrupt, or interfere with reasonable participation in University activities. Student disruptions or behaviours that interfere with university functions on online platforms (e.g. use of Avenue 2 Learn, WebEx or Zoom for delivery), will be taken very seriously and will be investigated. Outcomes may include restriction or removal of the involved students’ access to these platforms.

MISSED ACADEMIC WORK

Missed Mid-Term Examinations / Tests / Class Participation

Please do not use the online [McMaster Student Absence Form \(MSAF\)](#) as this is for Undergraduate students only. The MBA program will not accept an MSAF.

When students miss regularly scheduled term work which contributes 10% or more to the final grade, for legitimate reasons as determined by the Student Experience – Academic Office (SEAO), the activity necessary to compensate for the missed work will be determined by the course instructor. The compensatory activities assigned will vary with the nature of the course and the missed requirement. They include, but are not restricted to, an alternative assignment, a rescheduled midterm exam, or re-weighting the marks for the missed component to other mark components. Documentation explaining such missed work must be provided to the SEAO within five (5) working days of the scheduled date for completion of the work.

Acceptable reasons for missed work, along with the [Petition for Missed Term Work](#) and the [MBA Student McMaster University Student Health Certificate](#), can be found on the DeGroote MBA Student website (mbastudent.degroote.mcmaster.ca). Please direct any questions about acceptable documentation to the MBA Academic Advisors (askmba@mcmaster.ca).

University policy states that a student may submit a maximum of three (3) [Petition for Missed Term Work](#) per academic year, after which the student must meet with the Director of the program.

If term work is missed without an approved reason, students will receive a grade of zero (0) for that component.

Missed Final Examinations

Students must be available for the duration of the posted exam period regardless of their personal exam schedule. This is to ensure student availability throughout the entire exam period in the event that an exam must be rescheduled due to unforeseen circumstances (university closure, power outage, storm policy, etc.). A student who misses a final examination without valid reason will receive a mark of 0 on the examination.

Students who have missed a final exam for a valid reason can apply to the SEAO to write a deferred examination by submitting an [Application for Deferring a Final Exam](#) with supporting documentation. The application must be made within five days of the scheduled exam.

The [Application for Deferring a Final Exam](#) and the [MBA Student McMaster University Student Health Certificate](#) can be found on the DeGroot MBA Current Student website (mbastudent.degroote.mcmaster.ca)

Deferred examination privileges, if granted, are normally satisfied during the examination period at the end of the following semester. In select cases, the deferred examination may be written at a time facilitated by the SEAO and agreed to by the course instructor.

Requests for a second deferral or rescheduling of a deferred examination will not be considered.

ACADEMIC ACCOMMODATION FOR STUDENTS WITH DISABILITIES

Student Accessibility Services (SAS) offers various support services for students with disabilities. Students are required to inform SAS of accommodation needs for course work at the outset of term. Students must forward a copy of such SAS accommodation to the instructor normally, within the first three (3) weeks of classes by setting up an appointment with the instructor. If a student with a disability chooses NOT to take advantage of an SAS accommodation and chooses to sit for a regular exam, a petition for relief may not be filed after the examination is complete. The SAS website is:

<http://sas.mcmaster.ca>

Students who are leveraging accommodation for tests and exams are supported by the SEAO. These exams are written at the Ron Joyce Centre and do not take place in the Tim Nolan Testing Centre. Correspondence for accommodations is managed via the DSBSAS@mcmaster.ca email address. Students must communicate their intent to leverage accommodations on a test or exam a minimum of 10 business days prior to the assessment.

ACADEMIC ACCOMMODATION FOR RELIGIOUS, INDIGENOUS OR SPIRITUAL OBSERVANCES (RISO)

Students requiring academic accommodation based on religious, indigenous or spiritual observances should follow the procedures set out in the [RISO](#) policy. Students should submit their request to the SEAO *normally within 10 working days* of the beginning of term in which they anticipate a need for accommodation. Students should also contact their instructors as soon as possible to make alternative arrangements for classes, assignments, and tests.

COPYRIGHT AND RECORDING

Students are advised that lectures, demonstrations, performances, and any other course material provided by an instructor include copyright protected works. The Copyright Act and copyright law protect every original literary, dramatic, musical and artistic work, **including lectures** by University instructors.

The recording of lectures, tutorials, or other methods of instruction may occur during a course. Recording may be done by either the instructor for the purpose of authorized distribution, or by a student for the purpose of personal study. Students should be aware that their voice and/or image may be recorded by others during the class. Please speak with the instructor if this is a concern for you.

POTENTIAL MODIFICATION TO THE COURSE

The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites weekly during the term and to note any changes.

RESEARCH USING HUMAN SUBJECTS

ONLY IF APPLICABLE

Research involving human participants is premised on a fundamental moral commitment to advancing human welfare, knowledge, and understanding. As a research intensive institution, McMaster University shares this commitment in its promotion of responsible research. The fundamental imperative of research involving human participation is respect for human dignity and well-being. To this end, the University endorses the ethical principles cited in the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans:

<http://www.pre.ethics.gc.ca>

McMaster University has mandated its Research Ethics Boards to ensure that all research investigations involving human participants are in compliance with the Tri-Council Policy Statement. The University is committed, through its Research Ethics Boards, to assisting the research community in identifying and addressing ethical issues inherent in research, recognizing that all members of the University share a commitment to maintaining the highest possible standards in research involving humans.

If you are conducting original research, it is vital that you behave in an ethical manner. For example, everyone you speak to must be made aware of your reasons for eliciting their responses and consent to providing information. Furthermore, you must ensure everyone understands that participation is entirely voluntary. Please refer to the following website for more information about McMaster University's research ethics guidelines:

<http://reo.mcmaster.ca/>

Organizations that you are working with are likely to prefer that some information be treated as confidential. Ensure that you clarify the status of all information that you receive from your client. You **MUST** respect this request and cannot present this information in class or communicate it in any form, nor can you discuss it outside your group. Furthermore, you must continue to respect this confidentiality even after the course is over.

ACKNOWLEDGEMENT OF COURSE POLICIES

Your registration and continuous participation (e.g. on A2L, in the classroom, etc.) to the various learning activities of MBA C710 will be considered to be an implicit acknowledgement of the course policies outlined above, or of any other that may be announced during lecture and/or on A2L. **It is your responsibility to read this course outline, to familiarize yourself with the course policies and to act accordingly.**

Lack of awareness of the course policies **cannot be invoked** at any point during this course for failure to meet them. It is your responsibility to ask for clarification on any policies that you do not understand.

WEBSITES OF INTEREST

Canadian Institute for Health Information – National and provincial data on hospital, physician and other healthcare professions and services. Information on this website is mostly based on administrative data, including some data on expenditures and costing.

CIHI website: http://secure.cihi.ca/cihiweb/dispPage.jsp?cw_page=home_e

Canadian Agency for Drugs and Technologies in Health (CADTH)- Funded by the provincial ministers of health (and formerly known as CCOHTA) this organization undertakes clinical and economic evaluations of new technologies. They are also responsible for the Common Drug Review that advises the provinces on adoption (or not) of new technologies.

CADTH website: <http://www.cadth.ca/index.php/en/home>

National Institute for Clinical Excellence (NICE) – NICE is the independent organisation responsible for providing national guidance on the promotion of good health and the prevention and treatment of ill health. On 1 April 2005 NICE joined with the Health Development Agency to become the new National Institute for Health and Clinical Excellence (acronym still NICE).

NICE website: <http://www.nice.org.uk/page.aspx?o=home>

Patient Cost Estimator (CIHI) – Provides aggregate data on costing based on Case Mix Groups (CMGs). It can be sorted by province or nationally. Website:

<https://www.cihi.ca/en/spending-and-health-workforce/spending/patient-cost-estimator>

Institute for Clinical Evaluative Sciences (ICES) – ICES is an Ontario Ministry of Health funded research group that “providing unique scientific insights to help policymakers, managers, planners, practitioners and other researchers shape the future direction of the Ontario health care system”

ICES website: <http://www.ices.on.ca/webpage.cfm>

COURSE SCHEDULE

C710
Health Economics and Evaluation
Winter 2024 Course Schedule

WEEK	DATE	ASSIGNMENT/LECTURE
1	Thur Jan 11	Lecture: Introduction, course outline, quick review of the Canadian health care system, and intro to economic principles Readings: Courseware Optional web reading: http://www.hc-sc.gc.ca/hcs-sss/pubs/system-regime/2005-hcs-sss/index-eng.php
2	Thur Jan 18	Lecture: Markets and health care markets. Health Insurance and health insurance markets, and government intervention in health care insurance Readings: Courseware
3	Thur Jan 25	Lecture: Demand for health and utility maximization. Technology assessment and basics of economic evaluation Readings: Drummond 4 th ed. Ch. 2
4	Thur Feb 1	Lecture: Cost minimization, cost consequence, cost effectiveness, and cost benefit analyses, with case studies Reading: Drummond 4 th Ed. Ch 4 & 6 <i>Due: Critique article identified</i>
5	Thur Feb 8	Lecture: Quality of life and cost utility analysis, with case studies Reading: Drummond 4 th Ed. Ch. 5 and courseware <i>BIA assignment DUE today at 2:30pm.</i>
6	Thur Feb 15	Lecture: Costing methodologies and challenges, & discussion of trials versus models Reading: Drummond 4 th ed. Ch. 7 & 8
	Thur Feb 22	READING WEEK <i>Case study #1, Clotbuster available on A2L</i> <i>Critique article due Sunday February 25th via A2L at 11:59pm.</i>

7	Thur Feb 29	<i>Project groups formed and project outline due today</i> Lecture: Decision analysis and modeling Reading: Drummond 4 th Ed. Ch. 9 & Courseware
8	Thur Mar 7	Lecture: Methods for dealing with uncertainty Reading: Drummond 4 th Ed. Ch. 11 & Courseware <i>1st case (Pass/Fail) & Discuss 2nd Case study</i>
9	Thur Mar 14	Project work time (Schedule meeting with Professor) <i>Hand in via A2L Case study #2- Clotbuster (Pass/fail)</i>
10	Thur Mar 21	Lecture: Pulling it all together, an application of economic evaluation in the pharmaceutical/devices industry as a case study (VIRTUAL VIA ZOOM, LINK TO BE PROVIDED) Reading: Courseware
11	Thur Mar 28	Project work time (Schedule meeting with Professor)
12	Thur Apr 4	<i>Course Evaluation</i> Presentations (max 4 groups)
13	Thur Apr 11	Presentations, and hand in reports by Friday April 12 11:59pm