

**C711**  
**Principles and Applied Methods in Health Economics and Health  
Technology Assessment**  
**Fall 2025 Course Outline**

**Health Policy and Management**  
**DeGroote School of Business**  
**McMaster University**

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***COURSE OBJECTIVE***

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The objective of this course is to equip students with the practical knowledge of economic principles needed to apply them in health technology assessment, with a particular focus on the evaluation of pharmaceutical products by Canadian public and private payers.

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***INSTRUCTOR AND CONTACT INFORMATION***

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**Tuhin Maity, Ph.D.**  
Instructor  
[maityt@mcmaster.ca](mailto:maityt@mcmaster.ca)

**Student TA**  
TBD

**Course website:** <https://degroote.mcmaster.ca>

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### ***COURSE ELEMENTS***

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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
Evidence-based:	Yes	Experiential:	No	Final Exam:	No	Guest speaker(s):	Yes

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### ***COURSE DESCRIPTION***

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This course explores the application of economic principles to policy-relevant questions in health and healthcare. Topics may include, but are not limited to, applied health economics, the 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 strategies to improve value-for-money in the health sector.

The course will be delivered primarily in person through a combination of lectures, guest speakers, discussions, research projects, and presentations. Lectures will serve as a foundation for class discussions and the starting point of the course deliverables. Class time may also include interactive activities designed to illustrate key topics and issues, fostering deeper understanding through engagement and discussion.

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### ***LEARNING OUTCOMES***

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The objective of this course is to enable the students with the working knowledge of economic principles to apply them in situations that encompass access and policy related to healthcare. Some specific examples of such roles are:

- Market access associate/manager in a pharma company
- Market access associate/manager in a consulting company
- Reimbursement associate/manager in a public/private payer organization
- Health policy analyst within F/P/T governments

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### ***REQUIRED COURSE MATERIALS AND READINGS***

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Avenue registration for course content, readings and case materials <http://avenue.mcmaster.ca>

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### ***OPTIONAL COURSE MATERIALS AND READINGS***

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M. Drummond, et al, Methods for the Economic Evaluation of Health Care Programmes, 4th edition", Oxford Medical Publications (2015)

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### ***EVALUATION***

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Learning in this course results to a large degree from in-class/on-line 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**

<b>BIA project</b>	Specific topic (group)	15%
<b>Brief critique</b>	Based on recent HE lit. (individual)	15%
<b>CUA project</b>	Initial plan (group)	10%
<b>CUA project</b>	Final presentation (group)	45%
<b>Participation</b>	In-class Contribution (individual)	15%
<b>Total</b>		<b>100%</b>

### **Grade Conversion**

Instructors have the discretion of marking individual components of a course with either a letter or numerical grading scheme but final course grades taken at McMaster can only be reported as either Pass/Fail or letter grades. When numerical grading is used in a course, the final course average with decimal place of 0.5 or greater should be rounded up before conversion to a letter grade. The minimum passing grade for a graduate student in any course taken is a B-, including undergraduate courses or courses taken off campus:

LETTER GRADE	PERCENT	POINTS
A+	90-100	12
A	85-89	11
A-	80-84	10
B+	75-79	9
B	70-74	8
B-	60-69	7
F	00-59	0

### **Course Deliverables**

#### ***Group BIA project***

Students are expected to submit a BIA model using in Excel format. Detailed instruction will be provided in the class and an Excel BIA template will be made available to work on (students will need to modify it as appropriate).

#### ***Midterm critique***

Student teams will critique a recently published health economics article. It is worth **15%** of your final grade and will be marked individually.

#### ***CUA Project – Initial plan***

Each team is required to present their one-page plan for the CUA. Detailed description of the one-page plan will be provided during class.

#### ***CUA Project – Final submission***

Building upon the initial plan, student teams will submit their final excel model and defend the analysis in class. This is a new component introduced in Fall 2025 (in earlier terms, students used to submit a 20-page report). Details of this deliverable will be shared



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### ***COMMUNICATION AND FEEDBACK***

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Students who wish to correspond with instructors or other 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 Program Administrator.

Students who have concerns about the course content, evaluation methods, or delivery should first reach out to the course instructor. If your concern remains unresolved after speaking with the instructor, you may then reach out to the relevant Area Chair for further consideration.

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### ***ACADEMIC INTEGRITY***

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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](http://www.mcmaster.ca/academicintegrity)

Students are responsible for being aware of and demonstrating behaviour that is honest and ethical in their academic work. Such behaviour includes:

- following the expectations articulated by instructors for referencing sources of information and for group work;
- asking for clarification of expectations as necessary;
- identifying testing situations that may allow copying;
- preventing their work from being used by others (e.g., protecting access to computer files); and
- adhering to the principles of academic integrity when conducting and reporting research.

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### ***AUTHENTICITY/PLAGIARISM DETECTION***

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**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](http://www.mcmaster.ca/academicintegrity).

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### ***COURSES WITH AN ONLINE ELEMENT***

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**All courses** use some online 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.

Students may be required to use the Respondus LockDown Browser and Respondus Monitor. The Respondus LockDown Browser is a downloadable program that allows a student to take an Avenue to Learn quiz in a secure environment. Quizzes can be set to use LockDown Browser or LockDown Browser.

For more details about McMaster's use of Respondus Lockdown Browser please go to <https://avenuehelp.mcmaster.ca/exec/respondus-lockdown-browser-and-respondus-monitor/>

The available information is dependent on the technology used. Continuation in a course that uses online 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.

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### ***ONLINE PROCTORING***

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**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.

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### ***CONDUCT EXPECTATIONS***

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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, Teams, 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.

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### ***ATTENDANCE***

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Arriving late or missing class disrupts the learning experience for both you and your peers. Punctuality and attendance are crucial to maintaining a respectful, professional and productive environment for everyone, including our faculty.

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### ***MISSED ACADEMIC WORK***

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#### ***Missed Tests / Assignments/ Class Participation***

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

For scheduled courses where the end date is known and aligns to sessional dates, a grade must be supplied by the end of the course. Under exceptional circumstances a course instructor may approve an extension for the student for the completion of work in a course but must assign an Incomplete grade (INC) at the end of the course. Normally this extension is in the range of a few weeks. A student who receives an incomplete grade must complete the work as soon as possible, and in any case early enough to allow the instructor to report the grade by the sessional deadline noted as 'Final Date to Submit Results of Incomplete Grades'. If the INC grade is not cleared by the deadline, normally an F grade will be entered.

If a student is approved for an extension, they and instructors should make arrangements and submit an Incomplete (INC) Grade Memo to [busphd@mcmaster.ca](mailto:busphd@mcmaster.ca). If the student is not able to complete their course requirements by the INC deadline, they should submit a [Request for Extension](#) and be specific regarding the new deadline.

Missing Grade Memo is required if instructors are unable to submit any grades via Mosaic. The instructor must submit a Missing Grade Memo to [busphd@mcmaster.ca](mailto:busphd@mcmaster.ca).

Reasons for Incomplete course work can include:

- Health-related or extenuating circumstances
- Representing the University at an academic or varsity event
- Religious obligations
- Conflicts between two (or more) overlapping scheduled assignments.

### **Failing a Course**

Failure a course is reviewed by the appropriate Faculty Committee on Graduate Admissions and Study or the Associate Dean Graduate Studies in the Faculty. The Faculty Committee on Graduate Admissions and Study or the Associate Dean Graduate Studies requests a departmental recommendation regarding the student, and this recommendation is given considerable weight. In the absence of a departmental recommendation to allow the student to continue, the student will be required to withdraw. Those allowed to remain in the program must either repeat or replace the failed course or milestone, per the decision of the Faculty Committee on Graduate Admissions and Study. A failing grade in a Certificate, Diploma, Master's or Doctoral course remains on the transcript. Students who fail a second course or milestone will not normally be allowed to continue in the program.

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## **ACADEMIC ACCOMMODATION FOR STUDENTS WITH DISABILITIES**

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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>

### Process for Students

- Students must activate their accommodation(s) (e.g., extra-time, memory aid, etc.) for each upcoming test, assignment, or exam, at least two weeks in advance. Students can do this by emailing their Instructor and the PhD Program Administrator (busphd@mcmaster.ca). If a student cannot meet this deadline, they should contact to discuss alternative arrangements. The program is committed to exploring flexibilities where possible to support students.
- Students will leverage the accommodation (e.g., extra-time, memory aid, etc.), in a designated testing room. Rooms will be booked according to the student's SAS accommodation. Unless the accommodation states otherwise, students should expect that they will be writing in a room with other students. One or more invigilators will always be in the room. Students may also take their tests/exams at the SAS test centre on main campus.
- Following the request to activate the accommodation(s), busphd@mcmaster.ca will reach out to the student with their test, assignment, or exam details, including the date, time, and room number.

All policies and procedures, including restroom access, how extra-time is allocated for assessments under Universal Design, and the submission of memory aids in advance, are consistent with those of SAS on Main Campus. The only variance in procedure is communication around, and physical location of, assessment. There is not a dedicated testing space at RJC or DSB. Existing classrooms and lecture halls will be used for most testing. All SAS-approved accommodations will be honoured by our staff; however, core testing elements are not eliminated in alternative testing formats. Students should expect and plan for invigilation, incidental noise, and other potential distractions.

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

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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 (Student Experience Academic Office) **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.



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### ***COPYRIGHT AND RECORDING***

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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.

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### ***POTENTIAL MODIFICATION TO THE COURSE***

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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.

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### ***RESEARCH USING HUMAN SUBJECTS***

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#### ***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.

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### ***ACKNOWLEDGEMENT OF COURSE POLICIES***

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Your registration and continuous participation (e.g. on A2L, in the classroom, etc.) to the various learning activities of C711 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.

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### ***ARTIFICIAL INTELLIGENCE***

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In many professional settings, the ability to use AI tools effectively and responsibly is an essential skill. Therefore, the use of AI in this course is not inherently prohibited. However, there may be specific activities, assignments, or assessments where AI use would conflict with the learning objectives. In such cases, the instructor will clearly indicate when AI tools should not be used, and students are expected to comply with these directions.

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**COURSE SCHEDULE**

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**C711**  
**Principles and Applied Methods in Health Economics and Health**  
**Technology Assessment**  
**Fall 2025**  
**Tentative schedule, subject to change**

WEEK	DATE	TOPIC/ASSIGNMENT
	Sep 8, 2025	<ul style="list-style-type: none"> <li>No class, TM travelling</li> </ul>
1	Sep 15, 2025	<ul style="list-style-type: none"> <li>Introduction, course outline, quick review of the Canadian health care system, and intro to economic principles</li> </ul>
2	Sep 22, 2025	<ul style="list-style-type: none"> <li>Markets and healthcare markets.</li> <li>Health Insurance and health insurance markets, and government intervention in health care insurance</li> <li>BIA overview</li> </ul>
3	Sep 29, 2025	<ul style="list-style-type: none"> <li>Demand for health and utility maximization. Technology assessment and basics of economic evaluation</li> </ul>
4	Oct 6, 2025	<ul style="list-style-type: none"> <li>Cost minimization, cost consequence, cost effectiveness, and cost benefit analyses, with case studies</li> <li>BIA due before class today</li> <li>Critique articles identified</li> </ul>
5	Oct 20, 2025	<ul style="list-style-type: none"> <li>Costing methodologies and challenges, &amp; discussion of trials versus models.</li> </ul>
6	Oct 27, 2025	<ul style="list-style-type: none"> <li>Quality of life and cost utility analysis, with case studies</li> <li>Critique article due</li> </ul>
7	Nov 3, 2025	<ul style="list-style-type: none"> <li>Decision analysis and modeling</li> <li>Final project groups are formed.</li> </ul>
	Nov 10, 2025	<ul style="list-style-type: none"> <li>No class. TM travelling.</li> </ul>
8	Nov 17, 2025	<ul style="list-style-type: none"> <li>Methods for dealing with uncertainty</li> <li>Project outline is due</li> </ul>
10	Nov 24, 2025	<ul style="list-style-type: none"> <li>Meeting with TM, troubleshooting</li> </ul>
11	Dec 1, 2025	<ul style="list-style-type: none"> <li>Final presentation 1</li> </ul>
12	Dec 8, 2025	<ul style="list-style-type: none"> <li>Final presentation 2</li> </ul>