

**Business C711  
Health Economics and Evaluation  
Fall 2023 Course Outline**

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

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***COURSE OBJECTIVE***

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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 last 30+ years. 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.

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***INSTRUCTOR AND CONTACT INFORMATION***

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**Mon 7–10 pm  
Tuhin Maity, Ph.D.**

Instructor

[maityt@mcmaster.ca](mailto:maityt@mcmaster.ca)

Office: TBD

Office Hours: Tue 6-7 pm

Class Location: RJC TBD

**Student TA**

Saina Sehatkar Langrodi

sehatkas@mcmaster.ca

**Course website: <http://www.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 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.

This course will be taught using lectures, guest speakers, discussions, research projects and presentations and will be primarily an in-person course. 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.

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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 including eReserves for select book chapters

- <http://avenue.mcmaster.ca>

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

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

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None

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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>Brief critique</b> | Based on recent HE lit. (individual) | 15%         |
| <b>Discussion 1</b>   | Specific topic (individual)          | 7.5%        |
| <b>Discussion 2</b>   | Specific topic (individual)          | 7.5%        |
| <b>Team project</b>   | Presentation (group)                 | 15%         |
| <b>Team project</b>   | Report (group)                       | 40%         |
| <b>Participation</b>  | In-class Contribution (individual)   | 15%         |
| <b>Total</b>          |                                      | <b>100%</b> |

NOTE: The use of a McMaster standard calculator is allowed during examinations in this course. See McMaster calculator policy at the following URL:

[www.mcmaster.ca/policy/Students-AcademicStudies/UndergraduateExaminationsPolicy.pdf](http://www.mcmaster.ca/policy/Students-AcademicStudies/UndergraduateExaminationsPolicy.pdf)

#### **Grade 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:

| 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

#### **Midterm critique 1**

It is worth **15%** of your final grade and will be marked individually (if class size exceeds 24 students, modifications may be made). The critique will be due on **October 17<sup>th</sup> 7:00pm**. A full description of expected format will be provided on or before the second week of classes.

#### **Discussion questions**

The term will have two discussion questions, the first due on **October 31st** and the second due on **November 6th**. Each discussion is worth 7.5% for a total of **15%**.

#### **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 25 minutes with an additional 10 minutes for questions (some variation in length of presentation based on class size may occur).

#### **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 **October 24th**. The instructor will review the project for content and feasibility for the course, and provide appropriate feedback and guidance.

| ACTIVITY                 | DELIVERY | DESCRIPTION  | TOOL(S)  |
|--------------------------|----------|--|--|
| <b>Readings</b>          | Asynch   | Tied to weekly discussion prompts  | Readings linked in Avenue, from e-reserve, or in assigned textbook |
| <b>Group Discussions</b> | Both     | Synch: Breakout rooms during lecture<br>Asynch: Microsoft Teams private groups           | Asynch: A2L  |
| <b>Live Lectures</b>     | Synch    | Live session; opportunity to elaborate on content, present challenges, engage discussion | In class   |
| <b>Presentation</b>      | Synch    | Live session; opportunity to elaborate on content, engage discussion, receive feedback   | In class   |

### ***Participation***

Name cards and class pictures may be used to help give credit for your participation (15% of grade). You must have a name card with your full first and last name clearly written and displayed in front of you for every class (or in Zoom ensure your full name is displayed). A photograph of the class may be taken during class. This photograph may be used by the instructor to evaluate your participation. Therefore, once the photograph is taken, you **MUST** always attend that section of this course.

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.

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## ***COMMUNICATION AND FEEDBACK***

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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.

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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)

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

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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 ON-LINE ELEMENT***

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**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.

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### ***ON-LINE 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 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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## ***MISSED ACADEMIC WORK***

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### ***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](http://mbastudent.degroote.mcmaster.ca)). Please direct any questions about acceptable documentation to the MBA Academic Advisors ([askmba@mcmaster.ca](mailto: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 DeGroote MBA Current Student website ([mbastudent.degroote.mcmaster.ca](http://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.

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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>

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](mailto: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.

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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 **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 MBA 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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### ***WEBSITE OF INTEREST***

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**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](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

### C711 Health Economics and Evaluation Fall 2023 Course Schedule

| WEEK | DATE          | ASSIGNMENT   |
|------|---------------|--|
| 1    | Tue. Sept. 12 | <b>Lecture 1:</b> Introduction, course outline, quick review of the Canadian health care system, and intro to economic principles<br>Readings: eReserves and links in A2L  |
| 2    | Tue. Sept. 19 | <b>Lecture 2:</b> Markets and health care markets. Health Insurance and health insurance markets, and government intervention in health care insurance<br>Readings: eReserves and links in A2L   |
| 3    | Tue. Sept. 26 | <b>Lecture 3:</b> Demand for health and utility maximization. Technology assessment and basics of economic evaluation<br>Readings: Drummond 4 <sup>th</sup> ed. Ch. 2  |
| 4    | Tue. Oct. 3   | <b>Lecture 4:</b> Cost minimization, cost consequence, cost effectiveness, and cost benefit analyses, with case studies<br>Reading: Drummond 4 <sup>th</sup> Ed. Ch 4 & 6<br><br><i>Critique article identified</i>                            |
| 5    | Tue. Oct. 10  | <b>Lecture 5:</b> Costing methodologies and challenges, & discussion of trials versus models<br>Reading: Drummond 4 <sup>th</sup> ed. Ch. 7 & 8  |
| 6    | Tue. Oct. 17  | <b>Lecture 6:</b> Quality of life and cost utility analysis, with case studies<br>Reading: Drummond 4 <sup>th</sup> Ed. Ch. 5 and courseware<br><br><i>Critique article due today via A2L dropbox 7:00pm.<br/>Discussion 1 opens on Oct 18</i> |
| 7    | Tue. Oct. 24  | <b>Lecture 7:</b> Decision analysis and modeling<br>Reading: Drummond 4 <sup>th</sup> Ed. Ch. 9 & Courseware<br><br><i>Discussion 1 due by Oct 23<br/>Project groups are formed and outline is due today</i>                                   |
| 8    | Tue. Oct. 31  | <b>Lecture 8:</b> Methods for dealing with uncertainty<br>Reading: Drummond 4 <sup>th</sup> Ed. Ch. 11 & Courseware<br><br><i>Discussion 2 opens on Nov 1</i>  |

|    |              |  |
|----|--------------|--|
| 9  | Tue. Nov. 7  | Project work time, schedule meeting with your professor<br><i>Discussion 1 due by Nov 6</i>  |
| 10 | Tue. Nov. 14 | Project work time – no class   |
| 11 | Tue. Nov. 21 | <b>Lecture 9:</b> Pulling it all together, an application of economic evaluation in the pharmaceutical/devices industry as a case study. |
| 12 | Tue. Nov. 28 | <i>Presentation 1</i><br>Course evaluation   |
| 13 | Tue. Dec. 5  | <i>Presentation 2</i><br><i>Final report due by 11:59 pm</i>   |