HEALTH RESEARCH METHODOLOGY 741

INTRODUCTION TO HEALTH TECHNOLOGY ASSESSMENT

Fall 2019

COURSE COORDINATOR: Dr. Jean-Eric Tarride

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HRM 741
INTRODUCTION TO HEALTH TECHNOLOGY ASSESSMENT (HTA)

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HRM Course Outline

Course Number & Title:	HRM 741 Introduction to Health Technology Assessment
Course Coordinator:	Jean-Eric Tarride, PhD

Course Description

Health Technology Assessment (HTA) has the tremendous potential to transform the delivery of health care services, and improve health outcomes and quality of life. Decisions about whether to purchase and use new health technologies should be based on high-quality evidence of its impact on health outcomes, the health care system, and cost-effectiveness. Payers of health care face the challenge of aligning decision making with the best available evidence.

Upon completion of this course, students will be equipped with the skills to evaluate the quality of an HTA, to critically appraise it to make a judgment about a study's methods, results and conclusions. Additionally, students will gain some experience in conducting HTAs and be mindful of the barriers to, and facilitators of, evidence-based decision-making in the real world.

Introduction to HTA, HRM 741, is a course developed for graduate students registered in the Masters and PhD HRM Program.

Course Objectives

The objectives of the course are to:
1. introduce students to the basic framework for conducting an HTA;
2. learn how to apply the basic techniques required for an HTA (e.g., systematic literature review, economic evaluation) to approach and inform an HTA;
3. learn the basics of different types of economic models (decision trees, Markov models), and identify the type of modeling approach that is best suited for a particular disease and intervention;
4. understand the underlying ethical considerations that can enhance HTA by encouraging just process and socially responsible outcomes;
5. appreciate the nature of social values and how they differ from, and relate to, evidence in the context of HTA;
6. make students aware of how HTA results can be used by healthcare decision makers.

Educational Methods/Course Format

The course consists of 12 3-hour sessions, once a week (see table below). The first part of the course consists of presentations by the instructors of topics related to conducting an HTA will be followed by class discussion and exercises. The latter part of the course introduces students to some of the challenges when conducting HTAs and meeting decision maker's needs. The last 2 sessions consist of a recap of the concepts introduced in the course (session 12) and presentation of the individual projects (session 13).

Course Text/Materials	
The course synopsis, session outlines (including objectives, pre-readings and links to articles, pre-class work and in-class assignments) and slides of presentations will be posted on http://avenue.mcmaster.ca/. The slides of most of the lectures will be posted after each class.	
Prerequisites:	HRM 721 or permission from the course coordinator
Session	**Topic**
Session 1	Introduction to HTA
Session 2	Planning for the conduct of an HTA
Session 3	Identifying, aggregating and appraising the evidence for HTA
Session 4	Introduction to GRADE
Session 5	Synthesizing the evidence
Session 6	Economic evaluation and decision analysis
Session 7	Critical appraisal of economic evaluation, budget impact analysis (BIAs) and computer illustrations of cost-effectiveness models and BIAs
Session 8	Ethics and values in HTA
Session 9	Health Technology Management versus HTA
Session 10	Health system analysis
Session 11	Meeting decision maker needs
Session 12	Recap of major concepts and projects' discussions
Session 13	Project presentations

Evaluation of Student Performance

The intent is to allow the students to demonstrate their mastery of HRM 741 material through the following ways:

In-class Participation

The course covers a wide range of topics related to the overall HTA process. Some topics are well established while others are new and emerging research areas. Emphasis will be placed on attendance and class participation. The success of the course depends, to a considerable degree, on the effort students put into understanding the materials and share their ideas.

Submission of project question

The final deliverable for this course is an HTA on a medical technology (preferably something topical). Given that the translation of a health policy question into a relevant research question is an essential first step in the conduct of HTA, students are required to formulate a research question and submit for grading purposes. This should include at least some of the following: an overview of the technology being assessed; a clear specification of the policy problem; and the research question(s) (including PICOS) with objectives.

Submission of literature search strategy and results

The usefulness of an HTA is only as good as the information that goes into it and thus one of the most important elements of an HTA is a sound literature search. Students will get some in class training on how to conduct a literature search of electronic databases and will need to submit the search strategy for the chosen technology.

Project Presentation

Students will be expected to present their final course paper and answer questions. Students will be graded on their presentations.

Submission of Written HTA Project

The main assignment will require students to produce a scaled down HTA. The objective of the final course paper is for the student to show that they have obtained a clear understanding of the key processes involved in conducting an HTA by producing a scaled down HTA to evaluate a policy-relevant health technology/intervention. More information will be provided throughout the course, but the paper should contain the basic framework for conducting an HTA (the paper will be marked by at least two faculty members):

1) Background and technology overview
2) The issue: clear specification of the decision problem
3) Formulation of the research question you are trying to answer through your HTA
4) Objectives
5) Review of the clinical literature
6) Review of the economic literature
7) Consideration of social and ethical issues (if relevant)

8) Discussion
9) Conclusions/recommendations

Breakdown of Student Evaluation Components:

In-class participation:	5%
Submission of project question:	10%
Literature search	15%
Project presentation:	10%
Written HTA report:	60%

1. Research question (background, issue, PICOS) is due **Tuesday, October 8, 2019 --**1-2 pages:

2. The literature search strategy with results is to be handed in on **Tuesday, November 5, 2019**

3. The project presentations will be held on **Tuesday, December 10, 2019**. The presentation will be 20 minutes in duration (15 minutes for presentation and 5 minutes for questions)

4. The final HTA report (~20 pages double-spaced excluding references and appendices) must be submitted by **Tuesday, December 17, 2019 by 4:00 p.m.**

Evaluation of HRM 741:

Evaluation forms will be completed by each student for each session as well as for each lecturer. Course coordinators, presenters, and the department administration value these evaluations, which are used in planning revisions to the content and recruitment of faculty tutors.

The grading system for this course is outlined below:

A+ = 90 to 100 consistently outstanding

A = 85 to 89 overall superior quality

A- = 80 to 84 high achievement

B+ = 77 to 79 competent, but not consistently high quality

B = 73 to 76 satisfactory quality

B- = 70 to 72 only marginally acceptable

F = failure inadequate work

If a student receives a grade below B-, a recommendation may be made for the student to withdraw from the program.

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 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.

Attendance Policy:

The revised HRM Program attendance policy (approved by GPCC, March 10, 2015) and is the minimum requirement for the HRM Program; students should refer to the individual course

attendance policy in case there are additional course requirements re: attendance.

The HRM Program Attendance Policy includes the following:

• Any absence must be due to a reasonable excuse that is exceptional and out of the control to some extent of the student (illness, death in family, special exams, etc.).

• One absence from a tutorial with a legitimate excuse is reasonable, 2 may be acceptable at the discretion of the instructor, but if you miss 3 or more tutorials you will not obtain credit for the course. You will be required to withdraw from the course before the last drop deadline or you will receive an 'F' in the course.

• Attendance is considered in the assignment of participation grades. In cases where participation is credited for each session, you will normally receive 0 for participation for any day you are absent.