



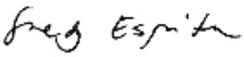
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December 3, 2008

To : Members of the Faculty of Health Sciences Graduate Policy and Curriculum Committee

From : Medy Espiritu 
Assistant Secretary and SynApps System Administrator

Please note that the next meeting of the Faculty of Health Sciences Graduate Policy and Curriculum Committee will be held on **Thursday, December 4, 2008** at **4:30 p.m.** in **MDCL-3018**.

Agenda: M.Sc. Global Health (Drs. N. Archer and A. Baumann)

PROPOSED GLOBAL HEALTH M.SC. PROGRAM

December 3, 2008

1. Introduction

Global Health can be defined as health problems, issues, and concerns that transcend national boundaries, they may be influenced by circumstances or experiences in other countries, and are best addressed by internationally cooperative actions and solutions. But Global Health is not just about health. It also includes considerations of the critical relationships among health, healthcare, sanitation, education, economic development, and business leadership and management.

Preparing students for a career that addresses the range of interrelated issues in Global Health requires a rounded interdisciplinary program involving courses and seminars in the global nature of the problems faced by underdeveloped and developing nations and indeed by developed nations. This will be provided to graduate students through a collaborative program between McMaster University and Maastricht University, giving our students an understanding of Global Health, in addition to the opportunity of becoming more specialized in one of the three program fields: Globalization and Development, Global Health Management, and Global Diseases.

This program will lead to the degree Master of Science in Global Health. This degree will be granted by either McMaster or Maastricht, with appropriate notation in the related transcripts to indicate that it is a collaborative degree program between the two universities. The program will involve collaboration among the Faculty of Health Sciences, the DeGroote School of Business, and the Faculty of Social Sciences at McMaster University, and the Faculty of Health, Medicine, and Life Sciences, the Faculty of Arts and Social Sciences and the International Center for Integrated Assessment and Sustainability Studies at Maastricht University in The Netherlands.

Maastricht University is one of Europe's most international universities, with non-Dutch students accounting for 45% of its aggregate intake. The vast majority of its 16 bachelor level degrees and almost all of its master's and Ph.D. degree programs are taught in English. Maastricht has headed the Dutch university league tables for many years, and it placed 111th in this year's annual ranking of the world's top 200 universities by the UK's *Times Higher Education Supplement* (McMaster placed 117th).

We expect to admit the first students to the program in September 2009. Only full time students will be considered. This is a one year Master's, and will be a terminal degree for most McMaster students, except for a relatively small number who may choose to complete a thesis and go on to Ph.D. studies. A thesis would extend the program's length for as much as two extra terms for McMaster students. McMaster's steady state target is 25 students entering each Fall, with as many as 20% thesis students and the remainder course-project. We anticipate no more than 20% of McMaster students to be visa students. Maastricht has a steady state target of 50 students, and they expect all their students to complete a Master's thesis within one year.

1.1 Objectives

The objectives of this program are:

- 1) To give students a solid foundation and understanding of the main issues in global health.
- 2) To provide a significant exchange of ideas and knowledge through interactions among students and faculty at McMaster and Maastricht Universities that will enrich student experience and learning, either

through physical exchanges of students and faculty or interaction through online sharing of courses and seminars

3) To give students an opportunity to specialize in one of the three pillars of the Global Health program (at McMaster): Globalization and Development, Global Health Management, and Global Diseases; or (at Maastricht): Implementing Innovations on a Global Scale.

4) To give students an opportunity to understand and potentially to experience at first hand the interrelated health, environmental, educational, and economic challenges faced by populations in under-developed and developing countries.

The three fields in the program at McMaster are:

a) Globalization and Development

Globalization focuses on cultural, political, social and economic globalizing processes in the contemporary era and how they impact economic development, health, healthcare, and education in underdeveloped and developing countries. These processes, often accelerated by information and communication technologies, have redefined in unequal ways how individuals and communities experience and view the world, and how they organize to change the world.

b) Global Health Management

Global Health Management introduces students to management and policy skills, including a fundamental understanding of the capacities needed to manage projects related to health, healthcare, economic development, and education.

c) Global Diseases

The Global Diseases field involves the study of endemic tropical diseases as well as other diseases that tend to afflict under-developed countries, including HIV/AIDS, tuberculosis, and cancer. A globalization topic that will be emphasized is the threat to public health from existing, new, and re-emerging diseases that may move almost with impunity across national borders through immigration, travel, and global trade. Chronic diseases that affect developed nations are also becoming a threat to health in developing nations, and will be addressed as well.

The fields of study in the program are not mutually exclusive, and students will choose from a wide spectrum of research interests that cross the rather fuzzy boundaries that define the fields. To encourage this cross-fertilization, all students will take the core courses Global Health Foundations I and Global Health Foundations II that bridge the fields. They will also attend the required joint seminars that address a variety of issues in Global Health. In addition they will choose fields, electives and do scholarly projects in areas of special individual interest, to enable them to build upon and advance their knowledge of Global Health in a manner that will often cross field boundaries. Finally, the student cohorts from both McMaster and Maastricht will attend Global Health 710, a joint Learning Symposium and Field Orientation, that will feature seminars by experts in the field, student presentations on selected research topics, and (where feasible) field visits to sites that involve development activities in global health relevant to the program.

2. Faculty

The faculty members from the three McMaster faculties are all highly qualified instructors and researchers. They are listed in Table 1. Some of the faculty members in this listing are near the beginning of their academic careers, and consequently have not had significant supervisory

experience. However, these faculty members have typically gained experience through service on graduate student supervisory committees. In addition, some of the Business faculty members are in an Area (Strategic Market Leadership and Health Service Management) which offers an MBA but does not currently offer an M.Sc. or Ph.D. degree. However, they are all extensively involved in research activities. They also teach MBA classes where they frequently supervise MBA term research papers and projects (not listed here).

2.1 Commitment of Faculty Members From Maastricht University

Commitment to this collaboration by the two universities is reflected in a Memorandum of Understanding that will be signed by officials at both universities. There are several ways in which this collaboration will enhance the program:

- There are two required Global Health Foundations I and II courses that will be taught sequentially in the two teaching terms. These will be jointly offered online by faculty members at both universities, and will include a number of special seminars by experts in the field from around the world.
- The Winter term will feature the possibility of student exchanges that will greatly increase the cross-fertilization of learning from faculty and among students
- The learning symposium and field orientation that all students from both universities will physically attend after the end of the Winter term will be organized, coordinated, and supervised through a collaboration by faculty and staff of both universities

All of the Maastricht educational units are within the Maastricht Faculty of Health, Medicine, and Life Sciences. Dr. Maria Stuttaford is a Maastricht faculty member from the Department of International Health who will participate directly in instructing McMaster students while they are at McMaster, through the online jointly offered Global Health Foundations I and II courses. As a consequence, she will be appointed as an adjunct part-time assistant professor at McMaster.

3. Program Considerations

3.1 Space

It is highly desirable for the students in the M.Sc. Global Health program to be located physically in a contiguous area. This encourages student interaction and cross fertilization from the diverse group of students that are expected to enter the program. Office/carrel space is not normally provided to graduate students pursuing the course-project option. The program requires office space for graduate students taking the thesis option (estimated at five students in steady state), administrators, and ready access to classrooms and seminar rooms. The graduate student study room in HSC 4N70 includes a total of 1500 square feet. It is accessible by graduate students in Nursing and Medical Sciences and includes 36 study carrels, 3 computers, and wireless Internet access. This space will be available for use by M.Sc. Global Health thesis students.

TABLE 1. McMaster Faculty Associated With The Global Health Program

Faculty Name & Rank	M/F	Ret. Date	Home Unit ²	Supervisory Privileges	Field/Expertise ¹			
					1	2	3	4
Category 1								
Andrea Baumann (Prof.)	F	N/A	Int. Health, Nursing	Full	X	X		
Category 3								
Noori Akhtar-Danesh (Assoc)	M	N/A	Nursing	Full				X
Vishwanath Baba (Prof.)	M	N/A	HRM	Full	X	x		
Kevin Brazil (Prof.)	M	N/A	CE&B	Full	x	X		
Jonathan Bramson (Assoc)	M	N/A	PMM, CGT	Full			X	
Will Coleman (Prof.)	M	N/A	Pol. Science, IGHC	Full	x	X		
Deborah Cook (Prof.)	F	N/A	Medicine, CE&B	Full				X
Gordon Guyatt (Prof.)	M	N/A	CE&B, Medicine	Full				X
Susan Jack (Assist.)	F	N/A	Nursing	Full				X
Padman Jayaratne (Assoc)	M	N/A	PMM	Full			X	
Paul Krueger (Assoc.)	M	N/A	CE&B	Full				X
John Lavis (Assoc.)	M	N/A	CE&B, CHEPA, PPD	Full		X		
Mark Loeb (Prof.)	M	N/A	PMM, CE&B	Full			X	
Christopher Longo (Assist.)	M	N/A	HSM	Full	X	x		
Ann McKibbon (Assoc.)	F	N/A	CE&B, HIRU	Full		X		
Geoffrey Norman (Prof.)	M	N/A	CE&B	Full				X
Robert O'Brien (Prof.)	M	N/A	Pol. Science, IGHC	Full		X		
Tony Porter (Prof.)	M	N/A	Pol. Science, IGHC	Full		X		
David Price (Assoc.)	M	N/A	Family Medicine	Full		X		
Glen Randall (Assist.)	M	N/A	SML & HSM	Full	X	x		
Aaron Schat (Assist.)	M	N/A	HRM	Full	X			
Peter Szatmari (Prof.)	M	N/A	Ped, Psychiatry	Full		X		
Ruta Valaitis (Assoc.)	F	N/A	Nursing	Full		x		X
Patricia Wakefield (Assist.)	F	N/A	SML&HSM	Full	X	x		
Yonghong Wan (Assoc.)	M	N/A	PMM, CGT	Full			X	
Zhou Xing (Prof.)	M	N/A	PMM, CGT	Full			X	
Toru Yoshikawa (Prof.)	M	N/A	SML&HSM	Full	X	x		
Category 5								
Daniel Drache (Prof.)	M	N/A	Pol. Sci. (York U.)	Co-Sup		X		
Category 6								
Mahshid Dehghan (Clin. Coord.)	F	N/A	PHRI, Medicine	Co-Sup			x	X
Forough Farrokhyar (Assist. Clin. Prof.)	F	N/A	CE&B, Surgery	Co-Sup				X
Tim O'Shea (Clin. Schol.)	M	N/A	GIM, Medicine	Co-Sup			X	

1 Field/Expertise: 1 – Global Health Management; 2 – Globalization & Development; 3 – Global Diseases; 4 (Expertise) – Epidemiology

2 CE&B – Clinical Epidemiology & Biostatistics; CEM – Centre for Evaluation of Medicine; CGT – Centre for Gene Therapeutics; CHEPA – Centre for Health Economics & Policy Analysis; EPC – Evidence Based Practice Centre; GIM- General Internal Medicine; HIRU – Health Information Research Unit*; HSM – Health Service Management; HRM – Human Resources Management; IGHC – Institute on Globalization & the Human Condition; SML – Strategic Market Leadership; Ped. – Pediatrics; PPD – Program in Policy Decision Making; PHRI – Population Health Research Institute; PMM – Pathology & Molecular Medicine.

Category 1: Tenured or tenure-track core faculty members whose graduate involvement is exclusively in the graduate program under review. For this purpose the master's and doctoral streams of a program are considered as a single program. Membership in the graduate program, not the home unit, is the defining issue.

Category 3: Tenured or tenure-track core faculty members who are involved in teaching and/or supervision in other graduate program(s) in addition to being a core member of the graduate program under review.

Category 5: Other core faculty: adjunct professor appointment.

Category 6: Non-core faculty who participate in the teaching of graduate courses.

3.2 Financial Support for Global Health Graduate Students

Graduate student stipends will be provided following practices adapted from existing graduate programs in the three participating faculties. Part time enrolment in this program is not available. Students will be encouraged to apply for relevant external scholarships including CIHR, SSHRC, OGS, and OGSST. Current scholarships levels for M.Sc. students are: CIHR CGS (\$17,500), SSHRC CGS (\$17,500), OGS (\$15,000), and OGSST (\$15,000).

For students without external scholarships, typical stipends for M.Sc. (thesis option) students in Health Sciences at McMaster currently total \$19,400. These include half Teaching Assistantships (currently \$4,940), Faculty of Graduate Studies scholarship awards of \$7,500, and additional support from research grants for thesis students, at the discretion of their supervisors. Thesis students who go on exchange are not eligible for Teaching Assistantship funds. Course-project students receive Faculty of Graduate Studies scholarships of \$2,000, but no TA funds. All students may apply for a limited number of travel scholarships of \$2000 per year which will be awarded on merit. Students must use these scholarships on travel related to scheduled program activities (e.g. student exchange at Maastricht University). Visa students with a minimum of an A- entrance average may be eligible to receive a tuition bursary through the Faculty of Health Sciences which covers the visa student/Canadian student fee differential, but this is not guaranteed. The Global Health Master's program is nominally a 12 month program, although thesis option students will take longer to complete their research and submit their theses. However, McMaster University puts time limits on funding of 20 months for Master's students.

Students will pay tuition according to the schedule for Master's programs established by the School of Graduate Studies. For students beginning their programs in the 2008-09 year, annual tuition fees are currently \$5,154 for Canadians and landed immigrants, and \$12,525 for visa students.

3.3 Distribution of Funds to Faculties

Appendix 3 is a spreadsheet that details the calculation of income and distribution of funds to University Administration, School of Graduate Studies, and the three Faculties, based on assumptions concerning the number of students entering the program each year, including their classification as Canadian/landed immigrant or as visa students. Near the bottom of the spreadsheet, the distribution to the three faculties is given, based on a 60/20/20 split between Health Sciences, Social Sciences, and Business respectively. Different scenarios are also given across the columns in this part of the table for totals of 25, 20, 15, and 10 students respectively.

Within Health Sciences, after subtraction of the annual operating costs of \$74,800 from the base amount (based on 25 student enrolment), there is a 10% tax on the remainder by both the Dean's office and the Associate Dean (Grad. Studies)'s office. The Associate Dean has agreed to return his

10% tax to the students in the form of TA/RA funding (this will fund up to two TA/RA students in the Faculty). The remainder after taxes will go to the departments providing instructional support, distributed proportionally to the departments for each course offered, according to the number of Global Health students taking each course.

4. Program Regulations

The Global Health program and courses will be overseen at McMaster by a Co-Director who will work closely with the corresponding Co-Director at Maastricht. The McMaster Co-Director will report to the Assistant Dean, Education Services, Bachelor of Health Sciences. Any changes to the McMaster curriculum will be approved through the Faculty of Health Sciences Graduate Curriculum and Policy Committee, the McMaster Graduate Council and the Senate, depending on the nature of the changes.

4.1 McMaster Admission Requirements

To be considered for admission to the M.Sc. Global Health program, an applicant must have:

- An Honours bachelor's degree with at least a B+ from an accredited university (equivalent to a McMaster 8.5 GPA out of 12) in the final year in all courses in the discipline, or relating to the discipline, in which the applicant proposes to do graduate work.
- A strong interest in one or more of the three fields offered in the program.
- One official transcript of academic work completed to date at all post-secondary institutions attended, sent directly from the issuing institution(s). If the final transcript does not show that a completed degree has been conferred, an official copy of the diploma is also required.
- All students entering the program must have completed a university level course in statistical analysis with a minimum grade of B-
- Students with no background in health may be required to complete a makeup course in health before entering the program
- Two confidential letters of recommendation from instructors most familiar with the applicant's academic work, sent directly from the instructors.
- A personal Curriculum Vitae (résumé)
- A written personal essay that explains why the applicant is seeking graduate education and describing how the applicant plans to benefit from the program (no more than 750 words)
- If English is not the applicant's native language, an official copy of the applicant's TOEFL Test of English as a Foreign Language score or other evidence of competency in English must be submitted; A minimum TOEFL (iBT) score of 92 (550 on the paper-based TOEFL or 237 on the computer-based test) is required.
- A maximum of 25 students will be admitted each year at McMaster and 50 at Maastricht, for classes beginning each September. Student exchanges between the universities will be possible during the Winter term, but numbers will be balanced as closely as possible so that the same numbers of students will be on exchange from each university.

4.2 McMaster Program Requirements

In order to graduate, a McMaster student is required to complete successfully:

- the five required half-courses
- the Learning Symposium and Field Orientation
- a research proposal developed under the direction of a supervisor
- Thesis students must also complete

- one half-course chosen from the selected field of study (or the three required Winter term modules at Maastricht if electing to exchange)
- a thesis on a topic in the student's chosen field of interest.
- Course-project students must also complete
- two courses chosen from the selected field of study and one course chosen from the list of electives (or the three required Winter term modules at Maastricht if electing to exchange),
- a major research paper on a topic in the student's chosen field of interest

4.3 Student Supervision

Each student will have a supervisory committee of two faculty members. One will be the student's supervisor (or an advisor in the case of course-project students), and the second member will be, if possible, from the university that is not the supervisor's/advisor's. Student supervisor/advisor assignments will be based on the field chosen by the students, selected from faculty members who are either members or associate members of the Faculty of Health Sciences. It may be possible but unusual for a Maastricht student to have a McMaster supervisor/advisor, and vice versa. This distribution of supervisory responsibilities between the universities will ensure a more uniform supervision and evaluation of the students. It will also ensure that the student's home university's policies on independent studies and scholarly research papers will be followed.

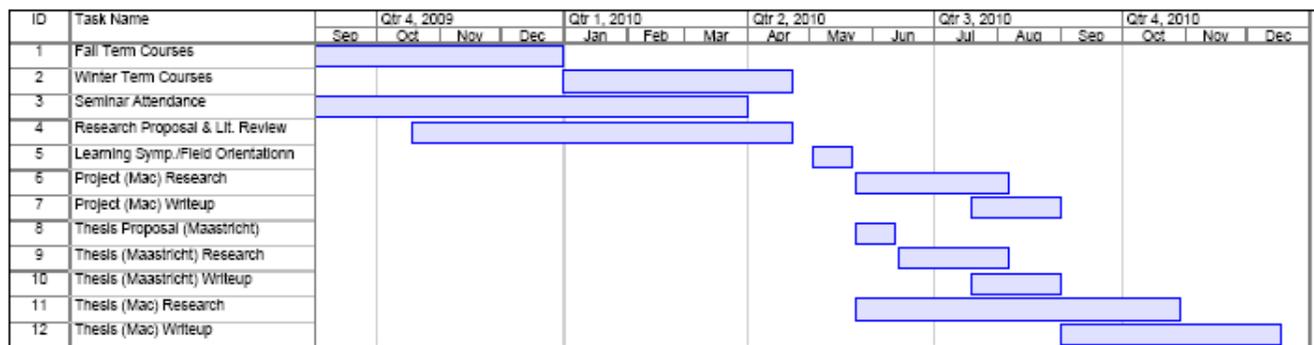
4.4 Distance Delivery

The joint courses and perhaps some of the other courses will be offered through distance education, utilizing systems that offer live presentations through the Internet, such as Elluminate® and/or support systems that provide access to online files and presentations, such as Blackboard®. This will enhance remote course sharing between the two universities to increase cross-fertilization of ideas among students and faculty members.

4.5 Program Format

The program will be 12 months in duration and will consist of three terms, except for McMaster students taking the thesis option (this may extend the program duration to four and a maximum of five terms). Figure 1 is a Gantt chart showing a suggested timeline for the student cohort entering the program in September 2009. There are several differences among the schedules for Maastricht and McMaster students, and there is a difference between the schedules for McMaster course-project and thesis students. These are reflected in the schedules shown on the Gantt chart.

Figure 1. Timeline for Student Progress: Cohort Entering September 2009



The sequencing of the program will proceed as follows at McMaster and Maastricht.

1. Fall term (September – December)

Students will take the first term at their “home” institution. McMaster students will take a bundle of three parallel required courses. Students at Maastricht will complete a required group of program modules. In addition, students at both institutions will work in intercontinental teams on overarching assignments in the required course “Global Health Foundations I”.

2. Winter/Spring term (January – April)

The program is designed to optimize student exchange between the two institutions. Because of the different organizational structures and educational approaches at the two institutions (the Maastricht program consists exclusively of consecutive full time problem-based modules, while McMaster bundles 13 week courses), student exchange is concentrated in the second term.

During this term students will have the opportunity to travel to the other institution for the full term. Thus, students can choose to complement the orientation of their home institution with that of the sister institution or they can decide to stay “home” to expand their original orientation. Students at both institutions will take the required course “Global Health Foundations II”, working in intercontinental teams on overarching assignments. During this period course-project students at McMaster will also choose two courses from their selected field of interest plus one course from the elective group of courses. McMaster courses available during the Winter term are listed in Table 2, and their descriptions appear in Appendix 1. Thesis students will take one course from the field of their choice. Maastricht offers three consecutive five week modules that all students at Maastricht will take, and the descriptions of these modules appear in Appendix 2. Students at Maastricht will also have the opportunity to further their knowledge of methodology and statistics.

At the end of the Winter term (April) GH 710, a 3-4 week Learning Symposium and Field Orientation will be scheduled for all students of both institutions. The purpose of this symposium is to further exchange and unify perspectives. For example, students will present their research proposals in order to obtain a critical review and feedback, so they can further refine their proposals. The symposium will alternate annually between Hamilton and Maastricht, or preferably on site in a developing or underdeveloped country where students will be able to experience a real environment appropriate to their studies. The selection of an external venue will depend entirely on the availability of outside funding to support the learning symposium. If outside funding is not available, the symposium will be held at one of the universities, to limit travel movements and costs since some students will not have to travel to get to the meeting site.

3. Summer term (May – August)

During this term students return to their home institutions.

Students at *McMaster* are expected to have completed the development of a research proposal, including a literature review by the end of the winter term. Indeed, thesis students may have already completed their proposals and begun their research projects, since their course load in the winter term is limited to one required and one elective course. Upon return to their home institution, McMaster course-project option students will proceed to complete a major research paper, relevant to the field they selected, during the remainder of the summer. This may involve the collection or analysis of empirical data or it may involve a model or conceptual design based on a literature review undertaken

prior to the workshop. The scholarly study will be submitted as the student's Master's project and may in some cases be suitable for publication in the academic literature.

McMaster students taking the thesis option will spend the remainder of the summer and, normally, the fall term (in special cases extending into the following winter term) completing their research and their theses, which may involve the collection and analysis of field data or developing major conceptual works based on the literature.

4.6 Graduate Course Listing

Courses available to Global Health students at McMaster are listed in Table 2. Course descriptions are included in Appendix 1.

Table 2. Courses Available To M.Sc. Global Health Students at McMaster³				
Course	Faculty	2009-10⁴	2010-11	2011-12
Required				
GH 701 ⁵ Global Health Foundations I	Baumann, Stuttaford	F 20 / 30	F 25 / 40	F 25 / 50
Global St.710 Globalization: An Introduction	Coleman	F 35	F 40	F 40
HRM 721 Fundamentals of Health Research & Evaluation Methods	Staff	F 60	F 65	F 65
BUS C721 Health Policy Analysis	Randall	F 25	F 30	F 30
GH 702 ⁵ Global Health Foundations II	Baumann, Stuttaford	W 20 / 30	W 25 / 40	W 25 / 50
GH 710 ⁵ Learning Symposium and Field Orientation	Staff	S 20 / 30	S 25 / 40	S 25 / 50
Global Health Management Field				
Bus C711 Health Economics & Evaluation	Longo	W 18	W 20	W 20
Bus C741 Health Care Marketing	Wakefield	W 18	W 20	W 20
Bus I731 International Business	Yoshikawa	W 23	W 25	W 25
Global Diseases Field				
Biology 6P03 ⁶ Medical Microbiology	Jayaratne	W 66	W 68	W 68
Med Sci 717 Vaccines & Vaccine Immunology	Wan, Xing, Bramson	W 10	W 12	W 12
Globalization & Development Field				
Global St. 705 Global Public Policy	Coleman	W 18	W 20	W 20
Global St. 712 International Trade & Economic Development	Drache	W 14	W 15	W 15
Global St. 777 Global Governance	Porter	W 14	W 15	W 15
Electives				
BUS C722 Management of Population Health	Longo	W 18	W 20	W 20
HRM 770 Mixed Methods Research Designs for Health Services & Policy Research	Jack	W 17	W 19	W 19

3 Thesis students take the required courses and (if at McMaster) one course chosen from their selected field of study. Course-project students take the required courses and (if at McMaster) two courses from their selected field of study and one elective course. McMaster students at Maastricht in the Winter term will take the three required modules offered at Maastricht.

4 F (Fall), W (Winter), S (Spring); Expected course enrolment

5 Course offered jointly & simultaneously at McMaster and Maastricht. Class size is XX at McMaster / YY at Maastricht

6 6 Level Course (Both advanced undergraduate and graduate course)

5. Outcomes and Governance Structure

5.1 Projected Graduate Intake and Enrolment

If approved, our intention is to admit the first class of a combined total of 50 students in Fall 2009 and continue to increase student intake to a combined total of 75 students by Fall 2012 (See Table 3). Maastricht anticipates a higher intake than McMaster. However, if student demand materializes at a higher rate than projected, McMaster will consider raising its annual intake targets. Ongoing admission into the program will be on an annual basis, with a new student cohort starting every September. We anticipate that five (5) thesis students and twenty (20) course-project students will be admitted each year at McMaster when the program reaches steady state. Intake and enrolment figures are almost the same, since the program is completed by the course-project students at McMaster and by all the Maastricht students in 12 months, with only a small number of McMaster thesis students who may take up to 20 months to complete.

Table 3: Projected Intake for Master of Global Health Program

Year	Institution			Intake/Enrolment
	Mac(CDN)	Mac(Visa)	Maastricht	Total
2009-10	16	4	20	40
2010-11	20	5	30	55
2011-12	20	5	40	65
2012-13	20	5	50	75

5.2 Governance Structure

The governance structure for the program has been designed so that there is a sharing of responsibility between McMaster and Maastricht, through co-directors; one at each of the universities.

5.2.1 Program Co-Directors

Each University will appoint a Co-Director, who will be responsible for local management and coordination of the Global Health program with the stream field advisors, and for relations with the Co-Director at the other university in planning and carrying out the collaborative program. There will be regular consultation on such matters as program marketing, admissions, and scheduling of courses, seminars, and workshops. This position is a rotating three year appointment, decided jointly at McMaster between the Associate Vice President, Faculty of Health Sciences International Health, the Dean of the DeGroot School of Business, and the Dean of the Faculty of Social Sciences. It includes an annual salary release amount. The McMaster Co-Director will communicate and work regularly with the Maastricht Co-Director to ensure smooth operations of the program. The Co-Director at McMaster will also ensure that the Global Health program's operations are consistent with the short term and long term objectives of McMaster University and the participating Faculties, and will report and consult regularly with the Associate Vice President Faculty of Health Sciences International Health, the Dean of the DeGroot School of Business, and the Dean of Social Sciences.

5.2.2 Advisory Committees

Each university will have an advisory committee composed of faculty members or external members with research, teaching, or field experience who can assist the Co-Director in making plans and decisions that are consistent with the long term goals of the program. These advisors may also be involved in teaching and research in fields relevant to Global Health, and will advise the Co-Directors at their universities on stream and course content, instruction, and other academic matters. Current membership of the McMaster advisory committee includes:

Dr. Andrea Baumann - Chair (International Health), Dean Paul Bates (DeGroote School of Business), Dr. Will Coleman (Institute for Globalization and the Human Condition), Dr. Mark Loeb (Pathology and Molecular Medicine), Dr. Del Harnish (Biology and Pathology).

5.2.3 Administration (McMaster)

Students will be registered in the Faculty of Health Sciences, and the McMaster administrative home for the program will be in this Faculty, supported by an administrative component of program income. Funding will flow to each of the three faculties according to an agreed formula. Student support will flow from the Faculty of Graduate Studies (scholarships) to all students and from the faculties (TAs) to thesis students. Program administration will include organizing and managing applications and admissions, maintaining student records, marketing the program, and related program matters.

5.2.4 Academic Committee (McMaster)

The Co-Director will chair an academic committee composed of representatives from Health Sciences, Business, and Social Sciences. The academic committee will be responsible, in conjunction with their Maastricht counterparts, for setting target enrolments, and will oversee curriculum, admissions, reviews of student progress, scheduling, and the appointment of student advisors. An ad hoc committee will be appointed, also with representatives from the three faculties (typically the field advisors), to review student admission applications to the program.

5.3 Careers

Increasing numbers of persons working in Global Health have post-basic training, occasionally leading to a degree, in law, economics, business, education, sociology, psychology, informatics, development studies, and medical anthropology. The Master's in Global Health falls into this category. Healthcare professionals with training in this discipline can make an especially valuable contribution.

Graduates with field experience in a developing country are normally given preference in hiring. For persons working in short term assignments or primarily as clinicians, a Global Health degree adds little. However, for extended assignments and for jobs concerned with population-based research, training, and for jobs involving program development, implementation and evaluation, a Global Health degree can be valuable. The field of concentration will have some bearing on employability but not as much as the possession of a Global Health degree. This degree gives evidence of basic training in the core disciplines similar to most schools of public health: biostatistics, program planning, management, and leadership, especially if these augment one or more of the important programmatic content areas such as maternal and child health, health education, and environmental health.

APPENDIX 1. McMASTER COURSE DESCRIPTIONS

Required Term 1

GH 701 Global Health Foundations I (Joint) / Andrea Baumann (McMaster), Maria Stuttaford (Maastricht)

This joint course addresses cross-sectional and interrelated features of the health problems, issues, and concerns in the circumstances or experiences of nations that transcend national boundaries, and that are best addressed by cooperative actions and solutions. The critical relationships among health, healthcare, education, economic development, and business management will be explored in detail. Ethical issues in global health are also addressed. Discussion and interaction among the participants is strongly encouraged. The course will also include several seminars from recognized researchers in global health and infectious diseases, and from field workers familiar with the aspects of what graduates from this program are likely to encounter in their careers, accompanied by significant interaction and discussion.

Global St. 710 - Globalization: An Introduction / Will Coleman

An introduction to major theories and debates in the field of globalization studies.

HRM 721 Fundamentals of Health Research and Evaluation Methods / Staff

The major components of research activities are covered, including concepts of health, formulation of research questions, literature reviews, study designs, selection of study populations, choice of measuring instruments, and study interpretation issues such as determination of causality and the effectiveness of clinical and community interventions.

BUS C721 - Health Policy Analysis / Glen Randall

This course will examine the field of health policy analysis with particular emphasis on clinical, administrative and government policy. After establishing a framework by which to analyze policy – which will include consideration of stakeholders, pressure groups, values, institutions, and the media – various tools will be studied as means of formulating and evaluating policy. Techniques from business, political science, economics, sociology, epidemiology, and history will be used. Specific policy topics will be presented as illustrations of this management art.

Required Term 2

GH 702 Global Health Foundations II (Joint) / Andrea Baumann (McMaster), Maria Stuttaford (Maastricht)

Program and project management skills are essential to every graduate from this program. This course introduces global health program and project management, and demonstrates their application using real cases from each of the three Global Health program fields. Interaction among, and contributions from students are strongly encouraged. The course will also include regular weekly seminars, presented by students and their supervisors or advisors, resulting from their studies of

global health issues, and accompanied by significant interaction and discussion with other students, instructors, and supervisors.

Required Spring Term

GH 710 - Learning Symposium and Field Orientation / Staff

The aim of the learning symposium is to provide students with the opportunity to exchange knowledge, as equal partners, at a location that will provide a learning environment for all participating. Under the guidance of staff from both universities, students from Maastricht and McMaster Universities will come together to exchange and unify perspectives on global health issues. Learning will be enhanced through special lectures by experts in the field, field visits, small group discussions, and the presentations of conclusions from project work undertaken during the Foundations modules. During this period, students will also present their research proposals, in order to receive feedback from peers.

McMaster Courses Term 2 by Field⁷

Global Health Management

BUS C711 - Health Economics and Evaluation / Christopher Longo

This course will examine the application of economic principles to policy-relevant questions in the area of health and healthcare. Topics will include applied health economics, economic correlates to health, demand and supply of healthcare and insurance, healthcare system financing, alternative payment schemes, economic regulation of the pharmaceutical industry, cost-effectiveness and cost-benefit analyses, QALY's, and means by which to improve value-for-money in the health sector.

BUS C741 – Health Care Marketing / Patricia Wakefield

This course provides an in-depth understanding of the key concepts of marketing and their application to the rapidly changing public and private health care environment. Students build practical skills: in analyzing marketing problems in for-profit and not-for profit health care organizations in Canadian, U.S. and other international settings; and, in developing programs and strategies applying marketing tools and principles (such as pricing, promotion, products/services, consumer behavior, branding, segmentation, social marketing and health promotion). Students also increase their appreciation of the role of data collection, analysis, interpretation, and management in health care marketing decisions. The course consists of case discussion, lectures, guest speakers, readings (cases, articles, textbook), and practical field experience whereby student teams undertake marketing consulting projects in local health care organizations.

BUS I731 - International Business / Toru Yoshikawa

This course examines the environmental analysis of international business and surveys a number of managerial issues related to international operations. Macro strategic decision making and alliance formation are studied as are functional decision making in the areas of finance, accounting, marketing, human resources, sourcing, and production. The course acquaints students with available databases and their use, and requires a research project to be undertaken.

⁷ Thesis students choosing a particular field must select one of the courses listed for that field. Course-project students must select two courses from their chosen field and one course from the list of electives.

Global Diseases

Biology 6P03 - Medical Microbiology / Padman Jayaratne

Microbial infectious diseases of humans: ecology, evolution, epidemiology, immunity, pathogenesis and the treatments of these diseases.

Medical Sciences 717 - Vaccines and Vaccine Immunology / Yonghong Wan, Zhou Xing, Jonathan Bramson

Vaccines and vaccine immunology have become an important sub discipline of modern biomedical practice and research. It becomes increasingly important to both prevention and treatment of infectious diseases, cancer, autoimmune diseases and allergic diseases. This course is designed to provide graduate students with the basic concepts of current human vaccination programs, methods used to developing various forms of new vaccines, and vaccine immunology.

Globalization and Development

Global St. 705 - Global Public Policy / Will Coleman

An examination of policy-making at global institutions and the relationships with other scales of policy formation.

Global St. 712 - International Trade and Economic Development / Daniel Drache

This course studies the economic impacts of world trade on developing countries.

Global St. 777 – Global Governance / R. O'Brien, T. Porter

This course examines the institutions and processes of global governance. It considers different theoretical approaches to understanding rule creation and maintenance on a global scale. Approaches and issues that will be examined include: neoliberal and neorealist regime theory; critical theory approaches; international law, the role of corporations and private authority and the activity of global civil society.

Electives

BUS C722 – Management of Population Health / Christopher Longo

The Management of Population Health takes a meta-approach to health issues focusing on strategies to improve health and well-being while controlling costs. Several frameworks will be critiqued and concepts studied will include, but will not be limited to, the correlates of the health of different populations, the stages of the life cycle, the burden of illness for society, contagions and public health, the congruence between evidence and policy, prevention, community action, and the development of students' critical appraisal skills.

HRM 770 - Mixed Methods Research Designs for Health Services and Policy Research / Susan Jack, Staff

This course introduces students to the major concepts and issues involved in mixed methods approaches to tackle important questions in the field of health services and policy. LearnLink is used as the mode of instruction. A framework for thinking about mixed methods will be developed that provides guidance to decision-making about when and how to use mixed methods and models to study health services and policy problems. The course will provide students with knowledge of the current controversies and major challenges in the use of mixed methods and models of research. Students are expected to design a mixed method study as part of the course and critically evaluate the design options chosen by a classmate.

Appendix 2. Maastricht Term 2 Modules

“Implementing Innovations on a Global Scale”

Module 1: Globalization and Transferability: Building Networks in Genomics and Biotechnology (5wks)

Coordination: Rein Vos (FHML; HES), Angela Brand (FHML; INTHEALTH), Guillaume van Eys (FHML; MG)

In the last decade new technologies such as genomics and biotechnology have had a world-wide impact. New hopes are ventured and many stakeholders make claims about the promises and expectations which these new technologies may have with respect to major health problems in a globalised world. Genomics and biotechnology illustrate the way new ‘large-scale’ science develops by creating networks of different stakeholders connecting parties across the globe. Conversely, these networks have major impacts on citizenship and daily life and health of people throughout the world. Science co-evolves with the development of new legal, moral and regulatory regimes. Therefore, the ‘conventional’ view: first science, then technology and subsequently implementation in society has to be discarded. Scientific and technological developments evolve together with social, legal, ethical and cultural developments. An example here may be the development of corn genetically modified to produce better crops, among others through resistance against parasites occurring in specific global regions. Although crops improved, genetically modified products met resistance from worried citizens in industrialized societies. As a consequence, product information must now specify whether the item contains genetically modified components; which may in turn reduce its marketing opportunities. Thus, technologies are affecting the continuum of health, nutrition, food security and sources of income, such as the availability of medication or seeds to grow crops. But these technologies also influence the way communities respond to health and development interventions and the way public trust and accountability is shaped.

Drawing from the biosciences as well as from the social sciences and building on the modules (Maastricht University) and courses (McMaster) of the Fall term, this module critically reflects on promises and challenges of recent developments in (public health) genomics and bio-engineering in relation to global health. After having been introduced to the major health issues and practices related to public health genomics and biotechnology, students will be challenged to explore the development of scientific and technological networks, taking public health genomics and biotechnology – both the ‘green’ and the ‘red’ biotechnology – as paradigmatic cases. Thus, students will be prepared for a role as leader, policy-maker or manager, able to address the challenges involved in the implementation/translation of innovative technologies in a changing global reality.

Module 2: Medical Mobility: Outsourcing, Telemedicine, Medical Tourism and “Brain Drain” (5 wks)

Coordination: D. Townend (FHML; HES); A. Verbon, (FHML; MMB)

In the last decade the global transfer (real as well as virtual) of patients, professionals, knowledge, data, practice, technology, skills and capital has markedly increased. This occurs through different mechanisms. Through *medical outsourcing* a health care provider engages individuals or institutions outside their own organisation to provide medical services; *telemedicine* enables the electronic delivery of these services, either clinical (such as specialists consultations) or diagnostics (e.g. using

Indian radiologists to read radiographs during European or North American “out of office” hours); through *medical tourism* individuals obtain health care in another country (e.g. Indian hospitals offer high quality but cheaper heart surgery for foreign patients than ‘at home’). These may or may not be positive developments in health care delivery. However, a ‘brain drain’ is also seen in developing countries where highly skilled medical personnel emigrate to developed countries. This results in a situation where on one hand the receiving health care system becomes increasingly dependent on “foreign” staff and on the other, the country from which staff move lack sufficient medical staff. This globalization of the health care system raises concerns about medical, regulatory, legal, financial and policy issues.

This module will explore these processes and reflect on the possibilities and challenges they present for Global Health Governance and collaboration.

Module 3: Health In Times Of Crisis (5 wks)

Coordination: Jessica Mesman (FaSoS; S&T), Rachna Zeiss (ICIS)

Today’s societies can be considered as tightly knit systems in which science and technologies are pervasive. All kind of technologies support and strengthen the structures of our societal domains. However, the technological character of today’s societies makes these structures vulnerable at the same time. Such vulnerability thus is an inherent characteristic of today’s societies. Sometimes this quality turns into a problem or even a disaster. Risks to health, safety, freedom of choice, privacy and our environment are abounding in the world. During the last decades we have witnessed several high-tech related disasters. The Chernobyl nuclear accident, the Bhopal chemical disaster in India, and the Exxon Valdez oil spill — they all remind us that large-scale systems are vulnerable to human errors and technical malfunctions with far-reaching consequences for the health of men and its environment. Besides technological disasters, also natural disasters and warfare have a huge impact on health situation of individuals or populations. Besides these explicit forms of crisis, this course also discusses so-called ‘hidden’ forms of crisis: these are unintended, and at first sight not clearly related, consequences of technological interventions on health and health care. However, the impact of war and natural and industrial disasters on health often exceeds the boundaries of isolated countries. Therefore, this course will study the vulnerability of health in modern societies as a vulnerability of global technological culture.

With its focus on health issues that occur in times of crisis, the course critically reflects on current strategies/policies to prevent and to respond to these crises. In addition, it discusses the possibilities and impossibilities of alternative approaches to crisis/disaster management. The argument this course aims to make contrasts with commonly accepted health-risk management theories and practices that argue that it is important to define clear rules and protocols and make sure they are followed in order to make a society/ community as safe and healthy as possible. This ‘standard’ approach will be questioned in this course. Alternative ways of conceptualizing health, disease and governing health crisis will be discussed. Therefore, an inter-disciplinary study of the vulnerability and resilience of health care systems is required.

This course will be structured in three parts: first, the problem of vulnerability of health in a global world will be framed by reviewing a broad range of empirical domains. Students will reflect on both short term (e.g. diarrhoea and cholera) and long-term effects (e.g. cancer, trauma and amputations). Second, various theoretical approaches to study this specific vulnerability in times of crisis are explored; and third, these new conceptualizations are translated for and applied to issues of politics and governance.

Global Health Program

December 3/08	APPENDIX 3 Global Health Program - 5 Year Budget					
	Annual Budget					
Item	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Students						
CDN	0	16	20	20	20	20
Visa	0	4	5	5	5	5
Total	0	20	25	25	25	25
Direct Income						
Tuition (CDN Students)	\$0	\$90,710	\$113,388	\$113,388	\$113,388	\$113,388
Tuition (Visa Students)	\$0	\$55,110	\$68,888	\$68,888	\$68,888	\$68,888
BIUs	\$0	\$269,894	\$337,368	\$337,368	\$337,368	\$337,368
Total Income	\$0	\$415,715	\$519,644	\$519,644	\$519,644	\$519,644
Disbursements						
University	\$0	\$101,173	\$126,467	\$126,467	\$126,467	\$126,467
School of Grad. Studies	\$0	\$95,662	\$119,578	\$119,578	\$119,578	\$119,578
Faculty Deans	\$0	\$218,879	\$273,599	\$273,599	\$273,599	\$273,599
Total	\$0	\$415,715	\$519,644	\$519,644	\$519,644	\$519,644
Administration & Dev't Costs						
Operating Costs	\$0	\$63,000	\$63,000	\$63,000	\$63,000	\$63,000
Course Development	\$15,000	\$0	\$0	\$0	\$0	\$0
Marketing	\$11,800	\$11,800	\$11,800	\$11,800	\$11,800	\$11,800
Program Development	\$15,000	\$0	\$0	\$0	\$0	\$0
Total	\$41,800	\$74,800	\$74,800	\$74,800	\$74,800	\$74,800
Assumed Steady State 60/20/20 Distribution to Faculties						
Alternative Enrolments	CDN/Visa/Total	20/5/25	16/4/20	12/3/15	8/2/10	
	Faculty of Health Sciences	\$164,159.55	\$131,327.64	\$98,495.73	\$65,663.82	
	Faculty of Social Sciences	\$54,719.85	\$43,775.88	\$32,831.91	\$21,887.94	
	Faculty of Business	\$54,719.85	\$43,775.88	\$32,831.91	\$21,887.94	
	Total Distributed	\$273,599.25	\$218,879.40	\$164,159.55	\$109,439.70	
Tuition Fee Distribution						
	University	SGS	Faculty Deans			
Canadian Students	25%	25%	50%			
Visa Students	20%	10%	70%			