MCGILL DEPARTMENT OF GEOGRAPHY
COURSE OUTLINE *(tentative ~ subject to change)*

GEOG 403 **GLOBAL HEALTH & ENVIRONMENTAL CHANGE** **Winter 2014**

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Lectures: 13h05-14h25 Mondays and Wednesdays

Location: Burnside Hall 306

Teaching Assistant: Carol Zavaleta (claudia.zavaleta@mail.mcgill.ca)

Office hours:
Dr Donnelly: Mondays, 2:30-3:30pm, Burnside Hall 427
Ms Hongoh: by appointment, Burnside Hall 406
TA: Wednesdays, 10:00-12, Burnside Hall 427

Readings: Readings can be accessed electronically on *MyCourses*

COURSE DESCRIPTION

This course provides an introduction to perspectives on global health with a focus on the role of environmental change in determining health risk. The course will focus on ecologically-determined infectious diseases affecting development around the world (e.g. malaria), as well as diseases affecting Canada that have emerged within an international context (eg. West Nile Virus, SARS, and influenza). We will discuss the importance of environmental change in affecting disease outbreaks and disease risk, drawing on a number of case studies from around the world.

Note: This course is compatible with, and can be taken before/after/with GEOG 303. In contrast to GEOG 303, this course has increased emphasis on global health, and ecological determinants of health, particularly infectious disease.

Students are not required to have specific expertise in health, geography, and environment. Students should, however, have relevant interest/ courses in one of these areas.

LEARNING OUTCOMES

By the end of this course, students will be able to:

1. Identify key trends in environmental change and emerging infectious diseases.
2. Explain the causal links between processes of environmental change and health outcomes.
3. Describe the ways in which multiple factors interact and vary within a complex health system to affect a disease outcome.
4. Critically analyze the role of environmental change as a factor affecting health for a selected case study.
5. Develop confidence and competence in written and oral communication.

INSTRUCTIONAL METHOD

There are two 1.5 hour class sessions per week. This time will be a mixture of lectures, guest speakers, seminar discussions, student presentations, and small group work.

COURSE CONTENT

In this course, we will cover a range of topics and case-studies related to environmental change and infectious disease, including both qualitative and quantitative content. While the course material focuses on infectious diseases, students have the option of exploring non-infectious disease case-studies for their individual projects.

The course will not explicitly cover social determinants of health. While social, political, economic, and cultural processes will be implicitly included in discussions and case-studies, the course topics focus on environmental changes that are predominantly ecological and biophysical in nature.

IMPORTANT INFORMATION

Policies governing academic issues which affect students can be found in the Handbook on Student Rights and Responsibilities, Charter of Students' Right (online at http://www.mcgill.ca/files/secretariat/greenbookenglish.pdf).

Academic Integrity

McGill University values academic integrity. Therefore all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see http://www.mcgill.ca/integrity/ for more information).

Language of Submission

In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit in English or in French any written work that is to be graded.

Student Support

If you have a disability, please contact the instructor to arrange a time to discuss your situation. It would be helpful if you contact the Office for Students with Disabilities at 398-6009 (online at http:www.mcgill.ca/osd) before you do this.

Course Communication

Communication to students will often be via email on *MyCourses*. Students are encouraged to check *MyCourses* regularly for course updates. While students can set-up forwarding of *MyCourses* emails to personal accounts, they are strongly encouraged to forward this mail only to their official McGill email account (not hotmail or yahoo). The university and instructor cannot guarantee that course emails will be successfully forwarded to external email accounts.

ASSIGNMENTS AND EVALUATION

Evaluation

Individual Project	40 %
Group project	25 %
Final exam	25 %
Participation	10 %

In fairness to those who complete assignments on time, late assignments will be penalized by 10% per day (including Saturday & Sunday), and will not be accepted after grading and return of assignments. In cases of personal or academic difficulty, consideration may be given. Requests for consideration should be made well in advance of the assignment due date (i.e. >1 week prior to the due date). For all assignments, writing will be assessed not only for content, but for structure, clarity, and grammar.

Note that late hand-in of the Individual Project Draft 1 will not be accepted since this will prevent or delay the peer review process, and result in grade penalization.

Assignments

Individual Project (40%): At the beginning of the term, students will select a case-study topic to pursue for their Individual Project paper. One of the most important components of the individual project is the opportunity to learn from self- and peer-review on a first essay draft, and to incorporate this feedback into a final draft. This learning process is an important component of the course objectives. The Individual Project will consist of a first Draft, a Peer and self-review process, and a Final paper. **Note that No late assignments will be accepted for the first draft.**

Group project (25%): Students will be assigned to groups of approximately 4-5 students from a range of backgrounds. Students will work together in groups to prepare a poster presentation to be held during Week 12.

Final exam (25%): A final exam will be held during the exam period. The exam will be short essay format, and questions will be drawn from a selection of the weekly discussion questions used in class. The final exam will evaluate knowledge gained from both lectures and readings.

Participation (10%): Participation is a requirement of the course. Quality of contribution is as important as regularity of participation. The participation grade will be based on class participation, group work, evidence that students have completed assigned readings, and group peer review.

Concerns regarding grading should be directed to the instructors (not TA's). All grade re-evaluation requests should include: 1) a copy of the original assignment, and 2) a 1-paragraph description of why the student feels the grade should be re-evaluated. *Note that all re-marks are final, and new grades maybe either higher or lower than the original grade received.*

Date	Topic	Readings[1]	Assignments
Week 1			
M6 Jan	Intro 1 - Introduction and global burden of disease	*McMichael 2004 (W)*	
W8 Jan	Intro 2 - A history of environment and infectious disease	*Morens et al. 2008 (W)*	
Week 2		*Eisenberg et al. 2007 (M)*	
M13 Jan	Intro 3 - Environmental determinants of health	*Susser & Susser 1996 (W)*	
W15 Jan	Intro 4 - The quest for causality in epidemiology	*Plowright et al. 2008 (W)*	
Week 3			
M20 Jan	Intro 5 - Concept mapping & systems approaches to health	*Farmer 1996 (M/W)*	*Individual Project*
W22 Jan	Epidemiology 1 - introduction to epidemiological concepts	*Roux 2007 (M/W)*	*assigned*
Week 4			
M27 Jan	Epi 2 - Group exercise : Influenza outbreak	*Duke-Sylvester et al. 2008 (W)*	
W29 Jan	Epi 3 - Epidemic modeling (SIR and R_0)	*Stratton et al. 2008 (M)*	
Week 5			
M3 Feb	Epi 4 - Group exercise: Modeling HIV epidemics	*Berrang-Ford et al. 2008 (W)*	
W5 Feb	Epi 5 - Case-study	*McMichael et al. 2006 (W)*	
Week 6			*Group project*
M10 Feb	Group Project Work: presenting individual paper topics	*Jones et al. 2008 (W)*	*assigned*
W12 Feb	Emerging infectious diseases 1 - intro to EID	*Wolfe et al. 2007 (W)*	**Draft 1 due (W)**
Week 7			
M17 Feb	EID 2 – Case-study: Influenza	*Briand et al. 2011 (M/W)*	
W19 Feb	EID 3 - Environ. determinants of influenza	*Pada & Tambyah 2011 (M/W)*	
Week 8		*BioDiaspora - browse (M)*	
M24 Feb	EID 4 - Travel health scenarios	*Barnett & Walker 2008 (M)*	**Peer reviews due (W)**
W26 Feb	Career Paths in health	*Tatem et al. 2006 (M)*	
Week 9	No classes - Study break		
Week 10		*Gilchrist et al. 2007 (M)*	
M10 Mar	EID 6 - Zoonotic disease (Case-study)	*Sherman 2010 (M)*	
		Christou 2011 (M)	
W12 Mar	Case-Study 1: Walkerton E. Coli	*Ali 2004 (W)*	
Week 11		*McMichael et al. 2006 (W)*	
M17 Mar	Climate change 1 - Climate impacts on health	*One of (assigned):*	
		Patz et al. 2006 (W)	
W19 Mar	Climate change 2 - Challenges in attributing burden	*Curriero et al. 2001 (W)*	
Week 12			
M24 Mar	Poster presentations 1	*No readings*	**Group poster presentations**
W26 Mar	Poster presentations 2		
Week 13		***All:*** *Xun et al. 2010 (M)*	
		One of (assigned):	
M31 Mar	Climate change 3 - Climate change & malaria case-study	*Martens et al. 1995 (M)*	
W2 Apr	Case-Study 2: Trypanosomiasis in Uganda	*Rogers & Randolph 2000 (M)*	
Week 14			
M7 Apr	Case-Study 3: TBA	*No readings*	
W9 Apr	Summary and conclusions		**Final paper due (W)**

[1]Readings are posted on MyCourses; M = please read for Monday's class; W = please read for Wednesday's class.