FACULTY OF ENVIRONMENTAL STUDIES
York University
BES Program

UNDERGRADUATE COURSE SYLLABUS

Course: ES/ENVS 4800A 3.0 Advanced Topics in Environment and Health

Term: Winter 2019

Calendar Description
This course focuses on topics related to environment and health. Possible focal topics are: community health; HIV & globalization; ecosystem health; systems approaches to health; infectious diseases and global cities; health and environmental disasters; health and environmental justice; or toxic tort and community health.*

*This offering is organized around the topic of "ecosystem approaches to human health" or the "ecohealth" approach.

Prerequisite
Fourth year standing or by permission of the instructor. Students with Third year standing may have access subject to space availability and approval from the Faculty.

Course Director
Dr. Martin Bunch bunchmj@yorku.ca HNES 222
Course consultation hours: Daily after course activities

Time and Location
This course is offered at York University's "ecocampus" and the Lillian Meighan Wright Research Centre in Costa Rica. A mandatory session will be held at York University ahead of the field component.

Mandatory session: 28 January 2019 [location TBD]
Field component: 16 to 24 February 2019 (including the weekends) in Costa Rica

Purpose
The purpose of this course is to cultivate knowledge, skills and attitudes which will enhance the participants' ability to contribute to research, theory, education, policy and the practice of ecosystem approaches to health.

In order for students to have a more concrete experience of ecosystem approaches to health, some of the course has been designed around the theme of 'Ecohealth and Watersheds' which will focus on the case study of "linking heath, environment and community in the Alexander Skutch Biological Corridor".

Learning Outcomes
At the end of the course, the participants are expected to be able to:

1. Demonstrate an understanding of the relevance and complexity of ecosystem approaches to health and of related key concepts (such as health; ecosystems; equity; gender; transdisciplinarity; participatory research; collaborative learning; stakeholder; development; sustainability; knowledge; objectivity; and power) so as to argue their own working definitions in relation to time, scale and place.
2. Describe and critique the requirement for, and the relative roles of, the following principles in ecosystem approaches to health so as to demonstrate how these principles could be helpful in their own work:
    a. Principles that inform the practice (or doing) of ecohealth research and practice: transdisciplinarity, systems thinking, and multi-stakeholder participation.
    b. Principles that inform the goals of ecohealth research and practice: sustainability, social and gender equity, and knowledge to action.
3. Discuss and illustrate the particular challenges that complex ecohealth problems pose to research, action/intervention, and policy in general so that these challenges can be considered in the development of one's own project and the case study.
4. Practice critical thinking and reflection with regard to one's view of the world, choice of conceptual frameworks, roles, methods and actions. Reflect upon elements of one's ethical practice such as respect, reciprocity, relevance and responsibility.
5. Express and justify the need to use multiple modes of communication so that participants can practice different types of communication for different audiences.

Organization of the Course
The course involves a combination of formal lectures by the Course Director, seminar style discussions, site visits, material presented by students in the course, and in-class exercises.

This course employs Moodle to post course announcements, syllabus, lecture notes, and other course materials. Access is available at http://moodle.yorku.ca. Log in using your Passport York ID.

Evaluation
The grade for the course will be based on the following items weighted as indicated:

Evaluation Point	*% Value*	*Dates*
1. Class participation (contribution, peer feedback, etc.)	15%	Each class
2. Ecohealth case preparation (due prior to the field component)	10%	11 February
2. Rich Picture & Root Definitions (group work, including presentation)	20%	24 February
3 . Daily journals	15%	20 & 24 February

(handed in and graded twice in the course)

4. Project Proposal 30% 8 March (4:30 pm)
(due after the course)

5. Artifact 10% 8 March (4:30 pm)
(due after the course)

1. Class participation

Students are expected to attend class, actively participate in discussion, and demonstrate via this participation that they have read the required course readings. *In this class peer feedback of other students`case studies is also a component of class participation, so be sure to sign your name to feedback notes.* The table below presents a general guide to the evaluation of class participation used in this course.

Evaluation criteria for participation	Grades
• Degrees of absenteeism and associated lack of contribution	0-4
• Present, not disruptive. • Tries to respond when called on but does not offer much. • Demonstrates very infrequent involvement in discussion.	5
• Demonstrates adequate preparation: knows basic case or reading facts, but does not show evidence of trying to interpret or analyze them. • Offers straightforward information (e.g., straight from the case or reading), without elaboration or very infrequently (perhaps once a class). • Does not offer to contribute to discussion, but contributes to a moderate degree when called on. • Demonstrates sporadic involvement.	6-7
• Demonstrates good preparation: knows case or reading facts well, has thought through implications of them. • Offers interpretations and analysis of case material (more than just facts) to class. • Contributes well to discussion in an ongoing way: responds to other students' points, thinks through own points, questions others in a constructive way, offers and supports suggestions that may be counter to the majority opinion. • Demonstrates consistent ongoing involvement.	8
• Demonstrates excellent preparation: has analyzed case, issue, etc. exceptionally well, relating it to readings and other material (e.g., readings, course material, discussions, experiences, etc.). • Offers analysis, synthesis, and evaluation of case material, e.g., puts together pieces of the discussion to develop new approaches that take the class further. • Contributes in a very significant way to ongoing discussion: keeps analysis focused, responds very thoughtfully to other students' comments, contributes to the cooperative argument building, suggests alternative ways of approaching material and helps class analyze which approaches are appropriate, etc. • Demonstrates ongoing very active involvement.	9-10

[Criteria adapted from Maznevski, Martha L. (2007) *Grading Class Participation*. Teaching Resources Center, University of Virginia: Charolottesville]

2. Ecohealth case preparation

In this course, students will work on the development of a project proposal to an international development agency to fund and apply an "ecosystem approach to human health and well-being" project. The project will be "workshopped" throughout the field course. The case preparation assignment involves the identification of a problematic situation that the project will address, so that students will come to the field part of the course with a situation identified and sufficient materials available to work it. They will identify their potential project participants, stakeholders and driving forces associated with the problematic situation, and will provide a bibliography of at least ten (10) sources of information about the situation.

3. Rich Picture and Root Definitions

This is a group project that has three components: Development of a diagrammatic expression of a problematic situation (the `rich picture`), development of `root definitions` (core expressions of systems of interest in the situation from different perspectives), and a group presentation of these to the class. All three components will be completed within the field dates of the course. Rich pictures and root definitions are techniques common in the application of Soft Systems Methodology, a very effective problem solving strategy in Action Research. SSM is applied in situations where it is difficult to identify what is (are) the underlying problem(s), where purposeful human activity is involved, and where there are multiple stakeholders and interests. For this project, the problematic situation may be a case study of a group member, local issues near the location of the field school, or another issue agreed to by group members.

4. Daily Journal

Daily journal entries should explore ecohealth themes in relation to the case study, classroom sessions, readings, the student's own experiences during the course, and his or her own work. A variety of entries are welcome and could include conventional academic writing and creative work such as poetry, photography, or artwork. Students will be asked to submit their journal two separate times during the course. There will be one round of feedback during the course. When submitting their journal on the last day of the course, students will select three of their daily reflections to be 'graded'.

5. Project Proposal

This assignment is due after the field dates of the course. The project proposal is either a research proposal, or a proposal to undertake an applied project (e.g., to work to improve a situation). The

proposal is to be written on the topic of the case study that each student developed during the course. A photograph of the case study poster should be included as an appendix. The project proposal will consist of a project proposal defined using the IDRC proposal form (link below, and also available on moodle). Undergraduate students complete the first section "PROPOSED RESEARCH AND OFFICIAL REQUEST" portion. Graduate students will also include the budget and fill out remaining portions of the proposal form as if they were to submit it to IDRC (they are not required to provide banking information nor attain institutional signatures).

https://www.idrc.ca/sites/default/files/sp/Documents%20EN/resources/14374838661application-for-a-research-grant-e.doc

6. Artefact

This assignment is due after the field dates of the course. As part of your final assignment, you will create an 'Artefact' and written reflection on your learning process about ecohealth during the course and where you find yourself currently in relation to the ongoing journey of learning about ecohealth. This artefact can take whatever form you wish (sculpture, painting, crafted object, poetry, song, multi-media display etc.) It will be accompanied by a 200 – 300 word explanation and reflection that explains the meaning of the artefact.

Required Readings (all are available electronical, either freely or through a York Library licence)

1. Allen, T. F. H., Bandurski, B. L., & King, A. W. (1994). *The Ecosystem Approach: Theory and Ecosystem Integrity* (Special Report of the Ecological Committee to the Great Lakes Science Advisory Board) (p. 64). Windsor, ON: Great Lakes Science Advisory Board.
2. Berbés-Blázquez, M., Bunch, M. J., Mulvihill, P. R., Peterson, G. D., & van Wendel de Joode, B. (2017). Understanding how access shapes the transformation of ecosystem services to human well-being with an example from Costa Rica. *Ecosystem Services*, 28, 320–327. https://doi.org/10.1016/j.ecoser.2017.09.010
3. Bunch, M. J. (2016). Ecosystem Approaches to Health and Well-Being: Navigating Complexity, Promoting Health in Social–Ecological Systems. *Systems Research and Behavioral Science*, *33*(5), 614–632. https://doi.org/10.1002/sres.2429
4. Bunch, M. J., Morrison, K. E., Parkes, M. W., & Venema, H. D. (2011). Promoting health and well-being by managing for social-ecological resilience: The potential of integrating ecohealth and water resources management approaches. *Ecology and Society*, *16*(1), 6. [online] URL: http://www.ecologyandsociety.org/vol16/iss1/art6/.
5. Charron, D. E. (Ed.). (2012). *Ecohealth Research in Practice: Innovative Applications of an Ecosystem Approach to Health*. Ottawa, Ontario, Canada: Springer and International Development Research Centre.

6. Corvalan, C., Hales, S., & McMichael, A. (2005). *Ecosystems and Human Well-Being: Health Synthesis*. Geneva: WHO.
7. Cumming, G. (2011). Spatial resilience: integrating landscape ecology, resilience, and sustainability. *Landscape Ecology*, *26*(7), 899–909. https://doi.org/10.1007/s10980-011-9623-1
8. Fieten, K. B., Kromhout, H., Heederik, D., & van Wendel de Joode, B. (2009). Pesticide Exposure and Respiratory Health of Indigenous Women in Costa Rica. *American Journal of Epidemiology*, 169(12), 1500–1506. https://doi.org/10.1093/aje/kwp060
9. Marmot, M. (2007). Achieving health equity: from root causes to fair outcomes. *The Lancet*, *370*(9593), 1153–1163.
10. Max-Neef, M. A. (2005). Foundations of transdisciplinarity. *Ecological Economics*, *53*(1), 5–16. https://doi.org/10.1016/j.ecolecon.2005.01.014
11. Meadows, D. (2008). *Thinking in Systems - A primer*. White River: Chelsea Green Publishing Company. Chapter 6 "Leverage Points: Places to Intervene in a System" republished by The Sustainability Institute.
12. Parkes, M. W., Morrison, K. E., Bunch, M. J., & Venema, H. D. (2010). Towards Integrated Governance for Water, Health and Social-Ecological Systems: The Watershed Governance Prism. *Global Environmental Change*, *20*, 693–704. https://doi.org/10.1016/j.gloenvcha.2010.06.001
13. Parrott, L., & Lange, H. (2013). An Introduction to Complexity Science. In C. Messier, K. J. Puettmann, & K. D. Coates (Eds.), *Managing Forests as Complex Adaptive Systems: Building Resilience to the Challenge of Global Change* (pp. 17–32). New York: Routledge Earthscan.
14. Romanelli, C., Cooper, David, Campbell-Lendrum, Diarmid, Maiero, Marina, Karesh, William B., Hunter, Danny, & Golden, Christopher D. (2015). *Connecting Global Priorities: Biodiversity and Human Health A State of Knowledge Review*. Geneva, Switzerland: World Health Organization and Secretariat of the Convention on Biological Diversity. https://www.cbd.int/health/SOK-biodiversity-en.pdf [Read Part 1, and other chapters as needed/appropriate]
15. Saint-Charles, J., Rioux-Pelletier, M. E., Mongeau, P., & Mertens, F. (2012). Diffusion of environmental health information: the role of sex-and gender-differentiated pathways. In Canadian Institute for Gender & Health (Ed.), *What a difference sex and gender make: A gender, sex and health research casebook* (pp. 69–76). Vancouver, B.C.: Canadian Institute for Gender & Health.

NB: Some time will be provided during the day for students to read, and they will have the evenings. However, it is strongly advised to read as many of these as possible ahead of the course.

Schedule of Topics and Activities

The following list of lecture topics and readings is subject to change. Topics covered in each week of the course are presented below. Readings will be either accessible over the WWW or posted as a pdf file on the moodle course website. To access online file it will generally be necessary to be using a computer with a York University IP address (e.g., on campus, logged into the FES virtual server, or logged in via Passport York to the York Libraries system). To access papers using the DOI number, type the following into your browser's address bar: http://dx.doi.org/*[doi number]*.

Note: It is recommended to read some of the readings below, BEFORE commencement of the course. Recommended to read ahead: #5(Ch1); 6; 10; 14. You will also need to identify and read (and bring with you) resource papers to support investigation into your chosen environment and health issue.

Lecture topics and Readings

Date	Topic	Readings
Mon, Jan 28	Mandatory session Lecture/Seminar: Ecosystem Approaches to Human Health and Well-being (ecohealth approach) Assignment: Ecohealth case preparation	n/a
Fri, Feb 16	Arrive in San Jose; Stay at Hotel Aranjuez	n/a
Sat, Feb 17	Transit to EcoCampus; Course Logistics and Homestays Field Visit: Hike in Las Nubes reserve (biodiversity and health) Lecture/Seminar: n/a Exercise: Poster Assignment-Building an Ecohealth Project	5 (Ch 1 & 18), 3
Sun, Feb 18	Lecture/Seminar: Models of Environment and Health Exercise: Negotiating Health Field Visit: Marvin's farm, Santa Elena	12, 6
Mon, Feb 19	Field Visit: Los Cusingos, Quizarrá. Tour and ecology lecture Lecture/Seminar: Landscape Ecology Exercise: Map Literacy	4, 7, 14
Tues, Feb 20	Lecture/Seminar: Social-Ecological Systems and Complexity Exercise: Moon Ball game; Causal Loop Diagrams Field Visit: Felipe's Farm, Monte Carlo (Guest Lecture, Ricardo Lujan)	11, 13
Wed, Feb 21	Field Visit: Farm in ASBC [TBD] Free time in afternoon	2, 8
Thurs, Feb 22	Field Visit: Full day at EcoCampus Lecture/Seminar: Transdisciplinarity, Participation and Equity Exercise: Exercise: Project Poster Development: Rich Picture and Root Definitions of Environment and Health situations	9, 10,15 (Ch 1 & 2)
Fri, Feb 23	Field Visit: Regulo's Farm; Casey's Farm Evening at EcoCampus	5 (Ch 3 & 4)

Sat, Feb 24	Field Visit: Full day at EcoCampus Lecture/Seminar: Scale and Type; Ecohealth in Action Exercise: TBD	1
Sun, Feb 25	Field Visit: Half Day at Ecocampus Exercise: Course wrap-up; Rich Picture presentations Transit to San Jose (Departure)	n/a

Grading Scheme, Assignment Submissions, and Lateness Penalties
The grading scheme for ENVS courses conforms to the 9-point system used in other undergraduate programs at York. Assignments and tests will bear either a letter grade designation (e.g., A, B, C+, etc.) or an equivalent percentage grade. (See detailed descriptions in the FES *Regulations* or in the BES ***Handbook***) The final grade for the course will be calculated using the weighting formula established above for this course.

Instructions for Submission and Return of Final Assignments
In cases where students will be handing an assignment late in the term and the Professor or Teaching Assistant will not have an opportunity to return the graded assignment in a subsequent class/tutorial, special arrangements must be made to accommodate students' wishes to have the graded assignment returned to them:

a) students must submit their final assignment with a self-addressed, stamped, envelope if they want to receive the graded assignment. If the assignment is more than 5 pages in length they are advised to have the post office weigh the package to determine appropriate postage required.

b) if students do not attach a self-addressed stamped envelope, they must attach a document with their course details, their name and student number and their signature and a statement confirming they do not wish to have the assignment returned to them.

Proper academic performance depends on students doing their work not only well, but on time. Accordingly, **the assignments for ENVS courses must be received by the Instructor or Teaching Assistant on the due date specified for the assignment**. Assignments can be handed in either the course drop box located across room HNES 136C (the Maloca Garden office) or directly to the Professor prior to the due date.

Note: students may have their essay or assignment date stamped by Reception staff in HNES 137. Once date stamped, Reception staff will deposit the essay or assignment in the course drop box on behalf of the student. Assignments should not be deposited in the Instructor's or TA's mailboxes in the HNES building.

Lateness Penalty
Assignments received later than the due date will be penalized 5% of the value of the assignment *per day* that the assignments are late. For example, if an assignment worth 20% of the total course grade is a day late, 1 point out of 20 (or 5% per day) will be deducted. Exceptions to the lateness penalty for valid reasons such as illness, compassionate grounds, etc. will be entertained by the Course Director **only** when supported by written documentation (e.g., a doctor's letter). **Please note Faculty policy on electronic submission of material, "*That all written or visual work that is submitted as part of an academic program must be submitted in hardcopy (not electronically), unless previously agreed to by the instructor or advisor.*" Submission must be received in hard copy form on due date or will be considered late.**

Missed Tests
Students with a documented reason for missing a course test, such as illness, compassionate grounds, etc., which is confirmed by supporting documentation (e.g., doctor's letter) may request accommodation from the Course Instructor. *(State accommodation arrangement: e.g., allowed to write a make-up test on xx date.)* Further extensions or accommodation will require students to submit a formal petition to the Faculty.

ADDITIONAL INFORMATION
Provide a brief description (e.g. field trips, special lab session, special tutorials), dates, times, required materials or preparation, any fees or costs, etc.

Group Work. This course may require group work. Group work, when done well, can teach collaborative skills that are essential in many work contexts. It can enrich everyone's learning by making all students resources for each other, and can create a synergy based on the diversity of histories and perspectives of the group members. To ensure that group work is a positive experience, each group should first discuss and agree to ground-rules for effective group work such as: 1) active listening and facilitating equal participation of all; 2) respecting different opinions and different ways of knowing or communicating; 3) considering issues of power, difference and discrimination; 4) identifying a clear path of communication with Course Director should there be issues/concerns; and 5) making clear a path of action for issues regarding equity-related or harassment concerns.

Useful articles on working through equity issues in groups:
Burke, Bev et al. "Thinking Equity." *Education for Changing Unions.* Toronto: Between the Lines, 2002, 74-77.

Narayan, Uma. "Working Together Across Differences: Some Considerations on Emotions and Political Practice." *Hypatia,* Vol. 3, No. 2 (Summer, 1998), pp. 31-47.

Inclusivity in the BES Program
The BES Program strives to include a broad range of perspectives and substantive material in its course offerings. Central to a clear understanding of environmental problems is the link between exploitation of the natural world, and justice issues related to racism, gender inequity, and poverty. An inclusion of non-

western perspectives is therefore essential to a fruitful discussion of North-South issues, and environmental debates generally.

Religious Observance Days

York University is committed to respecting the religious beliefs and practices of all members of the community, and making accommodations for observances of special significance to adherents. Should any of the dates specified in this syllabus for in-class test or examination pose such a conflict for you, contact the Course Director within the first three weeks of class. Similarly, should an assignment to be completed in a lab, practicum placement, workshop, etc., scheduled later in the term pose such a conflict, contact the Course director immediately. Please note that to arrange an alternative date or time for an examination scheduled in the formal examination periods (December and April/May), students must complete and Examination Accommodation Form, which can be obtained from Student Client Services, W120 Bennett Centre for Student Services or online at http://www.registrar.yorku.ca/pdf/exam_accommodation.pdf

Academic Honesty

York students are required to maintain high standard of academic integrity and are subject to the Senate Policy on Academic Honesty as set out by York University and by the Faculty of Environmental Studies. Please read the *Senate Policy on Academic Honesty* (which can be found as Appendix One of the *Academic Regulations of the Faculty of Environmental Studies* or in the University Policies and Regulations section of the *York University Undergraduate Programs Calendar*), available at: http://www.yorku.ca/secretariat/legislation/senate/acadhone.htm

There is also an academic integrity website with complete information about academic honesty. Students are expected to review the materials on the Academic Integrity website at:

http://www.yorku.ca/tutorial/academicintegrity

HPRC Review Process

FES GUIDELINES AND PROCEDURES FOR ETHICAL REVIEW OF RESEARCH INVOLVING HUMAN PARTICIPANTS IN UNDERGRADUATE COURSES

York students are subject to the York University Policy for the ethics review process for research involving Human Participants. All research activity with human participants and minimal risk as part of this course has to undergo ethical review. Please consider the following definitions:

- "**Human participants**" in research will be defined as persons who provide data or information to the researcher which are typically not part of their professional capacity.

- The draft **definition of funded research** from the Human Participants Review Sub-Committee [HPRC] is: "'Funded' will refer to all research that is receiving money that is in response to a specific proposal and administered by the university. Research using monies not administered

by the University, and/or not in response to a specific proposal, will be considered 'unfunded'."

- The **definition of minimal risk** being used is the one given in the SSHRC/NSERC/MRC *Tri-Council Policy Statement Aethical Conduct for Research involving Humans* @ (August, 1998): "If potential subjects can reasonably be expected to regard the probability and magnitude of possible harms implied by participation in the research to be no greater than those encountered by the subject in those aspects of his or her everyday life that relate to the research, then the research can be regarded as within the range of minimal risk." (p. 1.5)

HPRC review forms are available at: http://www.yorku.ca/fes/resources/acadreg/

Student Conduct

Students and instructors are expected to maintain a professional relationship characterized by courtesy and mutual respect and to refrain from actions disruptive to such a relationship. Moreover, it is the responsibility of the instructor to maintain an appropriate academic atmosphere in the classroom, and the responsibility of the student to cooperate in that endeavour. Further, the instructor is the best person to decide, in the first instance, whether such an atmosphere is present in the class. A statement of the policy and procedures involving disruptive and/or harassing behaviour by students in academic situations is available on the York website at:
http://www.yorku.ca/secretariat/policies/document.php?document=202

Access/Disability

York provides services for students with disabilities (including physical, medical, learning and psychiatric disabilities) needing accommodation related to teaching and evaluation methods/materials. It is the student's responsibility to register with disability services as early as possible to ensure that appropriate academic accommodation can be provided with advance notice. *You are encouraged to schedule a time early in the term to meet with each professor to discuss your accommodation needs.* Failure to make these arrangements may jeopardize your opportunity to receive academic accommodations.

Additional information is available at http://www.yorku.ca/cds/ or from disability service providers:

- Office for Persons with Disabilities: Room N110 of the Bennett Centre for Student Services , 416-736-5297,
- Learning and Psychiatric Disabilities Programs - Counselling & Development Centre: Room N110 of the Bennett Centre for Student Services, 416- 736-5297, http://www.yorku.ca/cdc/
- Glendon students - Glendon Counselling & Career Centre: Glendon Hall 111A, 416-487-6709, http://www.glendon.yorku.ca/counselling/personal.html