

GEOG 9107A ENVIRONMENT AND HEALTH

Fall 2024

1. Course Information

1.1. Classroom Location:

Class Location and Time:

In-Person, Tuesdays from 9.00am-12.00noon

1.2. Contact Information:

Instructor: Isaac Luginaah

Office: SSC 1409

Office Hours: 1-3pm, or by appointment

Phone: 519-661-5111 x86944

Email: iluginaa@uwo.ca

The Department of Geography strives at all times to provide accessibility to all faculty, staff, students and visitors in a way that respects the dignity and independence of people with disabilities. Please contact the course instructor if you require material in an alternate format or if you require any other arrangements to make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 519-661-2147 for any specific question regarding an accommodation.

More information about “Accessibility at Western” is available at:

<http://accessibility.uwo.ca>

2. Calendar Description

The conceptual frameworks for environmental health research and policy analysis. Appraisal of methods of deriving and substantiating evidence in environment and health research. Approaches to environmental health policy formulation and the uses of evidence in the environmental health policy arena.

Three lecture hours, 0.5 course

There are no prerequisites for this course.

3. Course Objectives

- Examine conceptual frameworks for environmental health research and policy analysis
- Appraise methods of deriving and substantiating evidence in environmental health
- Review approaches to environmental health policy formulation
- Examine the uses of evidence in the environmental health policy arena
- Carry out critical research and analytic policy projects

4. Learning Outcomes

Students will understand the complexities involved in environment and health issues, and also develop critical thinking abilities on the relationship between science and policy.

5. Evaluation

- There will be two written papers worth 45 percent each. The first, due on Tuesday, October 29, 2024, will emphasize research and the second, due on Friday, December 20, 2024, will focus on policy.
- Participation in class will be worth 10%, it is expected that all students will be fully prepared for class and will participate fully in class discussion.

Evaluation Component	Percentage of Course Grade	Assignment Due Date
Paper 1	45%	October 29, 2024
Paper 2	45%	December 20, 2024
Participation	10%	-

Students are responsible for material covered in the lectures as well as the assigned chapters/sections in the text. Students are **REQUIRED TO COMPLETE ALL COMPONENTS** of this course. There are no exceptions to this. Extra assignments to improve grades will **NOT** be accepted.

Grades will not be adjusted on the basis of need. It is important to monitor your performance in the course. Remember: *You* are responsible for your grades in this course.

6. Lecture Schedule

Session	Date	Topic (Case Study topics may change depending on the interest of the students in the course)
Session 1	Sept 10	Introduction/ Population Health I
Session 2	Sept 17	Design, Measurement and Evaluation I
Session 3	Sept 24	Design, Measurement and Evaluation II
Session 4	Oct 1	Case Study:
Session 5	Oct 8	Case Study:
	Oct 15	Reading Break
Session 6	Oct 22	Case Study:
Session 7	Oct 29	Policy Analysis and Policy Argument
Session 8	Nov 5	Evidence, Policy and Policy Learning

Session	Date	Topic (Case Study topics may change depending on the interest of the students in the course)
Session 9	Nov 12	Policy Narratives and Policy Framing
Session 10	Nov 19	Policy Analysis – Case Studies
Session 11	Nov 26	Policymaking Under Pressure
Session 12	Dec 3	Review

A reading list for each session will be distributed a Session in advance (see attached for sessions).

7. University Policy Regarding Illness

7.1. Illness

Please visit the link to the university policy for more information.

<http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=> - Page 12

If you feel that you have a medical or personal concern that is interfering with your work, you should contact your Instructor, Graduate Program Administrator, Supervisor, or SGPS.

7.2. Attendance

It is expected that students will attend all classes. The professor does not provide access to lecture notes. Students are encouraged to obtain missed lecture notes from a fellow student.

8. Scholastic Discipline for Graduate Students

For the complete policy and regulations visit the [Graduate and Postdoctoral Studies](#) website

9. Procedures for Appealing Academic Evaluations

Students may appeal an academic decision or ruling in accordance with the appeal procedures set out below. Students have a right to appeal to their graduate programs and, if unsuccessful, to the Vice-Provost (Graduate and Postdoctoral Studies). Some decisions may be appealed further to the Senate Review Board Academic. The Vice-Provost's rulings in academic matters are final unless overturned or modified on appeal to the Senate Review Board Academic (SRBA).

For the complete policy and regulations visit the [Graduate and Postdoctoral Studies](#) website

10. Support Services

10.1. Support Services

Student Support Services can be reached at: <http://westernusc.ca/services/>

Student Development Services can be reached at: <http://www.sdc.uwo.ca/>

Students who are in emotional/mental distress should refer to Mental Health@Western http://www.health.uwo.ca/mental_health/ for a complete list of options about how to obtain help.

10.2. Short Absences

If you miss a class due to minor illness or other problems, check your course outline for information regarding attendance requirements and make sure you are not missing a test or exam. Cover any readings and arrange to borrow the missed lecture notes from a classmate.

10.3. Extended Absences

If you expect to be away from campus for an extended amount of time, please make prior arrangements with your course instructors and/or supervisor.

For the complete policy on registration, see:

http://grad.uwo.ca/current_students/regulations/4.html

10.4. Academic Concerns

If you are in academic difficulty, it is strongly recommended that you see your Graduate Program Administrator, Supervisor, or SGPS.

11. Important Dates:

September 5: Classes resume

September 13: Last day to add a first term half course

October 14: Thanksgiving Holiday – Department Office Closed

October 14-20: Fall Reading Week (No classes; Department Office open)

November 30: Last day to drop a first term half course or a full course without penalty

December 6: Classes end

December 7 and 8: Study days

December 9-22: Examination Period

12. Other Information

For a list of Graduate Regulations please visit the [Graduate and Postdoctoral Studies](http://www.grad.uwo.ca/current_students/regulations/index.html) website http://www.grad.uwo.ca/current_students/regulations/index.html

For The University of Western Ontario Senate Regulations, please see the [Handbook of Academic and Scholarship Policies](#)

Email Policies

Please respect the fact that Professors receive multiple emails from students and will deal with those emails in a fair, organized and timely manner. Please ensure the subject line contains the name, number and section of the course in question.

- Retain a copy of all submitted assignments (in case of loss) and graded assignments.
- Students who plan to be absent for varsity athletics, family obligations or other similar commitments should discuss their commitments with the instructor.
- Mobile telephones and any similar devices should be switched off during class. If you bring one to class, be sure to turn it off or you will be asked to leave.

13. Academic Offences

The statement: “Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:

http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_grad.pdf

Additionally, A) If written work will be assigned in the course and plagiarism-checking software might be used, the following statement to this effect must be included in the course outline: “All required papers may be subject to submission for textual similarity review to the commercial plagiarism-detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).” B) If computer-marked multiple-choice tests and/or exams will be given, and software might be used to check for unusual coincidences in answer patterns that may indicate cheating, the following statement must be added to course outlines: “Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.”

14. Western’s Commitment to Accessibility

The Department of Geography and Environment strives at all times to provide accessibility to all faculty, staff, students and visitors in a way that respects the dignity and independence of people with disabilities.

Please contact the course instructor if you require material in an alternate format or if you require any other arrangements to make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 519-661-2147 for any specific question regarding an accommodation. [Information regarding accommodation of exams](#) is available on the Registrar’s website.

More information about “[Accessibility at Western](#)” is available.

15. Mental Health

If you or someone you know is experiencing distress, there are several resources here at Western to assist you. Please visit Western’s [Health and Wellness website](#) for more information on mental health resources.

16. Support Services

[Academic Support and Engagement](#)

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SESSION 1
POPULATION HEALTH I

The population health perspective which maintains that many factors - including environment - are associated with health and well-being. We begin with Evans and Stoddart who were among the first to provide rigorous argument for health being produced by more than the availability of medical care. Such arguments have shaped both the clinical and epidemiological as well as the social scientific examination of what is health, disease and illness as the readings by Krieger, Mordacci and Wilkinson attest.

1. Evans, R.G. and Stoddart, G.L. 1990. Producing health, consuming health care. *Social Science and Medicine*, 31, 1347-63.
2. Krieger, N. 1994. Epidemiology and the web of causation: has anyone seen the spider? *Social Science and Medicine*, 39, No.7, pp. 887-903.
3. Kovács, J. (1998). The concept of health and disease. *Medicine, Health Care and Philosophy*, 1(1), 31-39.
4. Mordacci, R. 1998. The desire for health and the promises of medicine. *Medicine, Health Care & Philosophy*, 1: 21-30.
5. Wilkinson, R.G. 1996. *Unhealthy Societies: the afflictions of inequality*. London: Routledge, 13-2

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SESSION 2

DESIGN, MEASUREMENT AND EVALUATION I: DESIGN AND METHOD

In these next two sessions we shall look at design, measurement and evaluation issues. This Session we concentrate on designs utilized for environment and health research. First, we review basic epidemiologic research strategies. Morgenstern reviews the ecological method while Hennekens and Buring outline individual respondent-based designs. Engel calls for the need for a new medical model, Brown makes a case for qualitative environmental health research. Wakefield and colleagues study air pollution from the point of view of community action, risk perception, social capital and attachment to place.

1. Brown, P. 2003. Qualitative Methods in Environmental Health Research, *Environmental Health Perspectives*, 111(No. 14 Nov. 2003): 1789-1798.
2. Engel, G. (1977). The need for a new medical model: A challenge for biomedicine. *Science* 196 pp. 129-136
3. Hennekens, C. and Buring, J., 1987, *Epidemiology in Medicine*, Boston: Little Brown, 31-52. **Call #: WA950.H515e 1987 Taylor Lib**
4. Morgenstern, H. 1995. Ecologic studies in epidemiology: Concepts, Principles, and Methods, *Annual Reviews of Public Health*, 16, 61-81.

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SESSION 3

DESIGN, MEASUREMENT AND EVALUATION II: INTERPRETATION AND
EVALUATION OF EVIDENCE

In this second session on design, measurement and evaluation, we will examine how different methods lead to different types of evidence and assess the ways of enduring the validity or trustworthiness of that evidence. We begin broadly with Hage and Meeker who address 'causality' in 'social' research which has relevance for environment and health. We then turn to Bradford Hill who established criteria for assessing the association between environment and health, while Baum, writing from the point of view of public health practitioners, points out that nature of different sorts of evidence and their philosophical and practical bases. The remaining two papers are concerned with the interpretation and interpretability of epidemiologic evidence more directly and point out the specific "biases" of various study designs for making health to environment links - Frank et al. and Ozonoff.

1. Bradford Hill, A. 1965. The environment and disease: association or causation? *Proceedings of the Royal Society of Medicine*, 58, 295-300.
2. Frank, J. W., Gibson, B. et al. 1988. Information needs in epidemiology: detecting the health effects of environmental chemical exposure. In Fowle, C. et al. (eds) *Information needs for Risk Management* (pp. 129-145). Toronto, Institute for Environmental Studies Monograph No. 8. University of Toronto.
3. Hage, J. and Meeker, B. 1988. *Social Causality*. Boston: Unwin Hyman, 1-33.
 - a. Weldon Library – HM24.H329 1988
4. Ozonoff, D. 1994. Conceptions and misconceptions about human health impact analysis. *Environmental Impact Assessment Review*, 14, 499-515.
5. Howick, J., Glasziou, P., & Aronson, J. K. (2009). The evolution of evidence hierarchies: what can Bradford Hill's 'guidelines for causation' contribute. *Journal of the Royal Society of Medicine*, 102(5), 186-194.
6. Ward, A. (2009). Causal criteria and the problem of complex causation. *Medicine, Health Care and Philosophy*, 12(3), 333-343.

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SESSION 4

SOCIAL AND BUILT ENVIRONMENT AND HEALTH: URBAN HEALTH

Urban living has been under the microscope for some time now. Galea and Vlahov provide a review of the evidence related to urban health, and the challenges to the study of urban health. Northridge et al. presents a conceptual framework for understanding the connections between the built environment and health. Dannenberg et al. addresses how the design of a community-built environment influences health and outlines questions for future research. Sallis and Glanz take this further by examining the impact of the built environment on childhood inactivity and obesity, while Leventhal and Brooks-Gunn discuss the effects of neighborhood on children's health outcomes. We conclude the session with Veenstra et al. article which indicates that who you know and where you live has an influence on your health.

1. Galea, S. & Vlahov, D. (2005) URBAN HEALTH: Evidence, Challenges, and Directions. *Annual Rev. Public Health*, 26:341–365.
2. Northridge, M. E. et al. (2003) Sorting Out the Connections Between the Built Environment and Health: A Conceptual Framework for Navigating Pathways and Planning Healthy Cities. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, 80(4): 556-568.
3. Dannenberg, Andrew L., Jackson, Richard J., Frumkin, Howard, Schieber, Richard A., Pratt, Michael, Kohtitzky, Chris, Tilson, Hugh H. (2003). The Impact of Community Design and Land-Use Choices on Public Health: A Scientific Research Agenda. *American Journal of Public Health*, 93: 1500-1508.
4. Sallis, J. & Glanz, K. (2006). The role of built environments in physical activity, eating, and obesity in childhood. *The Future of Children*, 16(1): 89-108.

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SESSION 5
GENDER, INEQUALITIES, COGNITION

1. Delor, F., & Hubert, M. (2000). Revisiting the concept of 'vulnerability'. *Social science & medicine*, 50(11), 1557-1570.
2. Puri, S., Shaheen, M., & Grover, B. (2023). Nutrition and cognitive health: A life course approach. *Frontiers in public health*, 11, 1023907.
3. Morchain, D., Prati, G., Kelsey, F., & Ravon, L. (2015). What if gender became an essential, standard element of vulnerability assessments? *Gender & Development*, 23(3), 481-496.
4. Woodward, A., & Kawachi, I. (2000). Why reduce health inequalities? *Journal of Epidemiology & Community Health*, 54(12), 923-929.

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SESSION 6
CLIMATE CHANGE/FOOD SECURITY

1. Lipper, L., Thornton, P., Campbell, B. M., Baedeker, T., Braimoh, A., Bwalya, M., ... & Torquebiau, E. F. (2014). Climate-smart agriculture for food security. *Nature Climate Change*, 4(12), 1068-1072.
2. Azadi, H., Moghaddam, S. M., Burkart, S., Mahmoudi, H., Van Passel, S., Kurban, A., & Lopez-Carr, D. (2021). Rethinking resilient agriculture: From climate-smart agriculture to vulnerable-smart agriculture. *Journal of Cleaner Production*, 319, 128602.
3. Pearse, R. (2017). Gender and climate change. *Wiley Interdisciplinary Reviews: Climate Change*, 8(2), e451.
4. Adger, N. W. (2003) Social Capital, Collective Action, and Adaptation to Climate Change. *Economic Geography*, 79(4): 387-404.

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SESSION 7
POLICY ANALYSIS AND POLICY ARGUMENT

With this Session's readings we leave the treatment of research as research and confront the nature of the policy-making process. Pal (chapter 2 and 3) provides a basic outline of policy analysis from a theoretical and evaluative standpoint. Torgerson extends the argument by arguing that there is not one but three types of policy analysis, all being based on a different relationship between knowledge and politics. Dunn identifies different types of policy argument. A policy argument is the way in which information is transformed into policy claims. But information can be treated in different ways by different stakeholders leading to conflicting definitions and explanation.

1. Pal, L.A. 1992. *Public Policy Analysis: An Introduction*. Nelson, Scarborough, Weldon Library - **H97.P34 1992**
 - a. Chapter 2 - Policy Analysis: Theoretical Approaches
 - b. Chapter 3 - Policy Analysis: Evaluative Approaches
2. Dunn, W.N. 1994. *Public policy analysis: An introduction*. Prentice-Hall, Englewood Cliffs.
 - a. Chapter 4 – The Functions of Policy Argument
 - b. Chapter 5 – Structuring Policy Problems
3. Torgerson, D. (1986) Between Knowledge and politics: three faces of policy analysis. *Policy Sciences*, 19, 33-59. Weldon Library - **H1.P7**

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SESSION 8
EVIDENCE, POLICY AND POLICY LEARNING

Throughout the course, we have often found reference to equivocal evidence and decision-making under uncertainty. In this session, we examine the problematic relationship between science and politics. Harrison discusses this in the context of dioxin risk as seen by Canada and the United States. Aronson sees science as a claims-making activity. Sabatier takes a slightly different, and somewhat more optimistic, approach to policy analysis than many in his advocacy coalition framework which emphasizes the idea of policy learning. Flueler provides an example of how that framework relates to the issue of radioactive waste disposal, an issue with provide environment and health implications.

1. Aronson, N. 1994. Science as a claims-making activity: Implications for social problems research, J. Schneider and J. I. Kitsuse (eds.) *Studies in the Sociology of Social Problems*. Norwood, N. J: Ablex. 1-30. **Call #: HM51.S929 1984.**
2. McMullan, C. and Eyles, J. 1999. Risky business: An analysis of claims making in the development of an Ontario drinking water objective for tritium. *Social Problems*, vol. 46, no. 2, 294-311.
3. Harrison, K. 1991. Between science and politics: assessing the risks of dioxins in Canada and the United States. *Policy Sciences*, 24, 367-88
4. Kukkonen, A., Ylä-Anttila, T., Swarnakar, P., Broadbent, J., Lahsen, M., & Stoddart, M. C. (2018). International organizations, advocacy coalitions, and domestication of global norms: Debates on climate change in Canada, the US, Brazil, and India. *Environmental Science & Policy*, 81, 54-62.
5. Sabatier, P.A. 1987. Knowledge, policy-oriented learning and policy change. *Knowledge: Creation, Diffusion, Utilization*, 8, 649-92. **Weldon Ref: Photocopy 3878.**

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SESSION 9
POLICY NARRATIVES AND POLICY FRAMING

In this session, we explore the issues of contextualizing policy arguments and analyses through narrative and framing. Roe provides a structure for seeing policy debates as narratives, exemplified by global warming. Shanahan, et al discuss policy narratives within policy processes. This is further taken on by Garvin and Eyles in their analysis of claims made to produce a sun safety metanarrative. Oberg & Mason-Renton demonstrate how context frames policy responses while Jasanoff extends the argument through highlighting cross-national differences in policy implementation.

1. Garvin, T. and Eyles, J. 1997. The sun safety metanarrative. *Policy Sciences*, 30, 47-70.
2. Jasanoff, S. 1991. Cross-national differences in policy implementation. *Evaluation Review*, 15, 103-19.
 - a. Review, 15, 103-19.
3. Oberg, G. and Mason-Renton, S.A., 2018. On the limitation of evidence-based policy: Regulatory narratives and land application of biosolids/sewage sludge in BC, Canada and Sweden. *Environmental Science & Policy*, 84, pp.88-96.
4. Roe, E. 1994. *Narrative Policy Analysis: Theory and Practice*. Duke UP, Durham, Introduction
 - a. Chapters 2
5. Shanahan, E.A., Jones, M.D. and McBeth, M.K., 2011. Policy narratives and policy processes. *Policy Studies Journal*, 39(3), pp.535-561.

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SESSION 10
POLICY ANALYSIS - CASE STUDIES

1. Crabu, S., Giardullo, P., Sciandra, A., & Neresini, F. (2021). Politics overwhelms science in the Covid-19 pandemic: Evidence from the whole coverage of the Italian quality newspapers. *PloS one*, 16(5), e0252034.
2. Mason, S. A., Dixon, J., Mambulu, F., Rishworth, A., Mkandawire, P., & Luginaah, I. (2015). Management challenges of urban biosolids: narratives around facility siting in rural Ontario. *Journal of Environmental Planning and Management*, 58(8), 1363-1383.
3. Mkandawire, P., Luginaah, I. N., & Bezner-Kerr, R. (2011). Deadly divide: Malawi's policy debate on HIV/AIDS and condoms. *Policy Sciences*, 44(1), 81-102.
4. Ziegler, B. R., Wray, A. J., & Luginaah, I. (2019). The ever-changing narrative: Supervised injection site policy making in Ontario, Canada. *International Journal of Drug Policy*, 74, 98-111.

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SESSION 11
POLICYMAKING UNDER PRESSURE

1. Kerr, J. T. (2021). Science integrity and environmental decision-making in Canada: a fragile renaissance. In *Conservation Science and Advocacy for a Planet in Peril* (pp. 73-97). Elsevier.
2. Pal, A. L. 2010. (4th Ed) *Beyond Policy Analysis*. Nelson, Toronto.
 - a. Chapter 8
3. Pal, A. L. 2010. (4th Ed) *Beyond Policy Analysis*. Nelson, Toronto.
 - a. Chapter 9

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SESSION 12
NATIONAL AND PROVINCIAL POLICIES

In this session, we shall look at source documents that try to formulate ... policies at the national and international levels. To interrogate these documents, the tools and ideas obtained in Session 8-10 will be useful. First, we examine the Canadian Federal government's strategic plan (2003-2008) for pesticides management, and the government's response to a report by the House of Commons Standing Committee on the Environment and Sustainable Development. Harrison presents an elaborate account of climate change policy in Canada and United States.

1. Pest Management Regulatory Agency 2008. *Strategic Plan 2003 to 2008*. Her Majesty the Queen in Right of Canada, represented by the Minister of Public Works and Government Services Canada 2004.
http://www.pmla-arla.gc.ca/english/pdf/plansandreports/pmla_strategicplan2003-2008-e.pdf
2. Pest Management Regulatory Agency 2008. *Strategic Plan 2008 to 2013*.
http://www.hc-sc.gc.ca/cps-spc/alt_formats/pacrb-dgapcr/pdf/pubs/pest/corp-plan/strat-plan-eng.pdf
3. *Pesticides: Making the Right Choice for the Protection of Health and the Environment*
<http://cmte.parl.gc.ca/cmte/CommitteePublication.aspx?COM=173&Lang=1&SourceId=36396>
4. <http://www.parl.gc.ca/HousePublications/Publication.aspx?DocId=1031697&Language=E&Mode=1&Parl=36&Ses=2>
5. *Government Response to the Report of the House of Commons Standing Committee on the Environment and Sustainable Development*
<http://www.pmla-arla.gc.ca/english/pdf/hlawns/hl-GovtResp-e.pdf>