

SPPH 530 - Occupational and Environmental Epidemiology

When: Term 1: Sept 8th – Dec 3rd, 2015
Tuesday, 09:00- 10:30
Thursday, 09:00- 10:30

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Description:

This course will focus on two areas. First, it will examine issues that define occupational and environmental epidemiology as a sub-field of epidemiology. Secondly, it will focus on the specific challenges associated with planning and executing occupational or environmental epi studies, with a special emphasis on conducting studies in British Columbia and Canada.

Objectives:

To prepare students to perform effectively in the following areas:

1. Evaluate occupational or environmental health problems through epidemiologic research study design
2. Plan a feasible epi research study
3. Anticipate potential problems with respect to design (for example operational definitions of exposure and outcome, bias, confounding), practical implementation of the study; and data analysis and interpretation

Learning objectives:

4. Critically review epi literature for in-class discussion.
5. Understand suitable epidemiologic study designs for investigating differing exposure/disease associations.
6. Recognize study biases and understand methods for minimizing bias
7. Describe methods for assessing human exposures to hazardous agents for epidemiologic research purposes.
8. Describe the influences of genetic susceptibility on risks related to environmental agents.
9. Describe ways in which occupational and environmental epi methods are used by policymakers to set exposure guidelines and standards.

SPPH 530 - Occupational and Environmental Epidemiology

Evaluation will be:

- Class participation 20 %; based on attendance, participation in discussions, and evidence that students have read the assigned readings.
- Final report 60 %; The final report will require the student to design a B.C. based epidemiologic study to investigate the relationship between an occupational or environmental exposure and a health outcome.
- Assignments 20%: four assignments will be completed during term on various topics.

GRADING (from the UBC Department of Educational Studies, Graduate Course Grading Policy):

A Level (80% to 100%)

A+ is from 90% to 100%: **It is reserved for exceptional work** that greatly exceeds course expectations. In addition, achievement must satisfy all the conditions below.

A is from 85% to 89%: A mark of this order suggests **a very high level of performance on all criteria used for evaluation**. Contributions deserving an A are distinguished in virtually every aspect. They show that the individual (or group) significantly shows initiative, creativity, insight, and probing analysis where appropriate. Further, the achievement must show careful attention to course requirements as established by the instructor.

A- is from 80% to 84%: It is awarded for generally high quality of performance, no problems of any significance, and fulfillment of all course requirements.

B Level (68% to 79%)

This category of achievement is typified **by adequate but unexceptional performance** when the criteria of assessment are considered. It is distinguished from A level work by problems such as: One or more significant errors in understanding, superficial representation or analysis of key concepts, absence of any special initiatives, or lack of coherent organization or explanation of ideas.

The level of B work is judged in accordance with the severity of the difficulties demonstrated. B+ is from 76% to 79%, B is from 72% to 75%, and B- is from 68% to 71%

C Level (55% to 67%)

Although a C+, C, or C- grade may be given in a graduate course, the Faculty of Graduate Studies considers 68% as a minimum passing grade for doctoral graduate students.

SPPH 530 - Occupational and Environmental Epidemiology

Reading

Required Textbook

- Research Methods in Occupational Epidemiology, 2nd Edition. Checkoway H, Pearce N, Kriebel D, Eds. Oxford University Press, New York, 2004.

Required Journal Articles

- Journal article readings will be set throughout the term by the instructor

Recommended Textbooks

- Exposure Assessment in Occupational and Environmental Epidemiology, Nieuwenhuijsen, NJ, Oxford University Press, New York, 2003
- Topics in Environmental Epidemiology. Steenland K, Savitz DA, Eds. Oxford University Press, New York, 1997.
- Modern Epidemiology, 2nd Edition. Rothman KJ, Greenland S, Eds. Lippincott – Raven, Philadelphia, 1998.

SPPH 530 - Occupational and Environmental Epidemiology

Tentative Schedule (dates are subject change)

Wk	Topic for week	Date	Guest Instructor	Reading/Assignment
1	Introduction to Occ & Env Epi	9/8		
		9/10		
2	Exposure Assessment intro	9/15		
		9/17	TBD	
3	Cross-Sectional and Related Studies	9/22		
		9/24	Melanie Gorman-Ng	
4	Retrospective Exposure Assessment	9/29		
		10/1		
5	Cohort Studies	10/6		
		10/8	George Astrakianakis	
6	Exposure Assessment for Case-Control studies	10/13		
		10/15	Kay Teschke	
7	Case-Control Studies	10/20		
		10/22	Hind Sbihi	
8	Considerations for environmental Exposure Assessment	10/27		
		10/29	Sarah Henderson	
9	Environmental Studies	11/3		
		11/5	TBD	
10	Disease Surveillance	11/10		
		11/12	Mike Brauer	
11	Gene-Environment interaction studies	11/17		
		11/19	TBD	
12	Linked data, ethics, and other special topics	11/24		
		11/26	Mieke Koehoorn	
13	Student Presentations	12/1		
	Student Presentations	12/3		