

ENV H 586 A Au 18: Current Issues In Occupational Health At The Human Animal Interface

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ENV H 586A: Seminar in Current Issues of Occupational Health at the Human Animal Interface

Autumn Quarter 2018, 2 credits (graded)

day/time: Thursday 8:30-10:20 Room: HS E 214

INSTRUCTOR: Peter Rabinowitz MD MPH

Office: HSB F551, 1959 NE Pacific Street

Phone: (206) 616-0598

Email: peterr7@uw.edu (<mailto:peterr7@uw.edu>)

OFFICE HOURS: by appointment (contact Vickie Ramirez ramirezv@uw.edu)

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Course Description:

This course is a weekly seminar for in-depth exploration of a wide range of topics related to the occupational health of workers in close contact with animals in a number of different settings. It emphasizes current issues and research gaps in different workplace setting, and is based on critical readings of the scientific evidence regarding these issues.

The course meets autumn and spring quarters and is designed to meet the needs of students receiving specialized training in Occupational Health at the Human Animal Interface (OHHAI), as well as other students in occupational medicine, industrial hygiene, occupational health nursing, occupational health services, and toxicology. It is open to other students with permission of the instructor.

The fall quarter seminar will be geared primarily to the learning needs of the OHHAI trainees. The spring quarter seminar will typically be taught jointly with the ENV H 596 seminar for the Occupational Medicine trainees. Spring quarter will cover key issues that are common to the OHHAI learning objectives as well as learning objectives for occupational medicine clinicians.

Topics for ENV H 586 will be organized to cover a core curriculum that does not repeat over a two-year period, so students may take multiple (up to 4) quarters of the course without covering the same content. Although the content of the spring quarter ENV H 596 sessions appears similar from year to year, there will be a difference in emphasis and approach between two consecutive years, with a particular focus on recent updated scientific literature so that there will not be excessive redundancy for students who take the spring session two years in a row. The seminar format will include didactic presentations with discussion of scientific papers on the topic.

The seminar will use a “One Health” paradigm that integrates human, animal, and environmental health to explore occupational health issues in a number of animal contact settings, including agriculture, laboratory research, and veterinary medical care. Specific topics will include the assessment and management of biological, physical, chemical, and psychosocial exposure hazards in these different settings.

An emphasis will be placed on interdisciplinary occupational/environmental team approaches to address these issues including professionals from human health, animal health, and industrial hygiene. The seminar format will encourage student team work in interdisciplinary teams when possible.

The course will be organized into 4 segments to be given over a two year period. Two of them will take place during the fall 586 sessions, and two will be the joint 586/596 sessions. Each of the segments deals with a different aspect of the occupational Human Animal interface. The fall seminar sessions will focus on occupational and environmental aspects of particular types of animal workers. The spring joint seminar sessions will focus more on particular hazards and occupational services.

Segment 1: Occupational Health at the Human Animal Interface: Specific worker populations (last given Fall 2015)

Sessions:

1. Introduction to occupational health at the human animal interface
2. Literature searches and how to read the medical literature
3. Veterinary and animal care workers
4. Chemical hazards in animal agriculture
5. Dairy workers
6. Smallholder farmworkers
7. Swine workers
8. Poultry workers
9. Emerging infectious diseases and global health security
10. Global populations of animal workers

Segment 2: Joint OHHA/ Occupational Medicine Seminar (last given Spring 2016)

Sessions:

1. Introduction to occupational health research, reading literature
2. Noise as an occupational hazard
3. Biosafety in health care settings- Ebola etc.
4. Immunizations and blood borne pathogens
5. Emerging infectious disease (Zika)
6. Zoonoses- including the arctic and subsistence harvesters
7. Physical hazards: diving medicine, altitude medicine
8. Physical hazards: heat and cold
9. Travel medicine
10. Aerospace medicine

Segment 3: Occupational Health at the Human Animal Interface: Laboratory research settings (last given Fall 2016)

Sessions:

1. Introduction to occupational health at the human animal interface
2. Food production workers and AMR
3. Marine mammal workers
4. Pastoralist workers and TB and Brucellosis
5. Laboratory animal workers and animal allergy
6. Poultry workers and influenza
7. Veterinary workers and mental health
8. Dairy workers
9. Wildlife workers
10. Student projects : research needs

Segment 4: Joint Seminar: OHHA/Occupational Medicine (last given Spring 2017)

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Sessions:

1. One Health approaches to occupational health at the human animal interface
2. Noise as an occupational hazard

3. Biosafety in health care settings- Ebola etc.
4. Immunizations and blood borne pathogens
5. Emerging infectious disease (Zika)
6. Occupational Zoonoses-
7. Physical hazards: diving medicine, altitude medicine
8. Physical hazards: heat and cold
9. Travel medicine
10. Occupational allergy

Segment 5: ENVH 586- Fall 2017

1. Intro: Occ Health of Animal Workers
2. How to read literature
3. Global population of animal workers
4. Vet and animal care workers
5. Zoo and Aquarium
6. Veterinary and animal care
7. Dairy
8. Swine
9. Poultry
10. Smallholder farms
11. Emerging infectious disease.

Segment 7: ENVH 586/96 Joint Seminar: OHHA/Occupational Medicine Spring 2018

1. Intro/ Critical reading
2. Occupational allergy
3. Health care worker BBP
4. Travel med
5. Zoonoses
6. Training in Ag worker zoonotic emergencies
7. Temperature
8. Noise
9. Diving/altitude

The course is designed to give students exposure to a wide range of occupational health issues at the human animal interface. It also will stress the skills of critical reading and systematic review of the scientific literature, oral and written communication of health risks, and formulation of research hypotheses and study designs. Students will lead or play a major part in over half of the sessions in a given quarter. This will provide students with an opportunity to develop and demonstrate skills in literature review, presentation of materials, interdisciplinary teamwork, problem solving, practice planning, evidence based policy development, and research planning.

Students may register for 1-4 quarters for the course in any sequence; up to 8 credits can be earned for taking it. OHHAI trainees are expected to participate in at least 3 quarters of the seminar.

Canvas and email are the standard medium used for communication regarding this course, and readings will be distributed generally via Canvas or e-reserves. Students are responsible for ensuring that their correct email address is on file, and for informing the instructor if unable to use either electronic medium.

Course Learning Objectives

Each segment will cover a number of the overall learning objectives. At the end of the series of four segments, the student will be able to:

1. Critically review a scientific paper on a topic of interest related to occupational health at the human animal interface
2. Research an assigned topic, and demonstrate his or her expertise on that topic by professionally leading a portion of a class session on that topic.
3. Use electronic resources to systematically research human animal interface issues, and present the results of such review in a systematic fashion.
4. Identify the major types and sources of biological hazards at the human animal interface, including zoonotic infectious agents, allergens, and endotoxin.
5. Identify the major types and sources of physical and chemical hazards at the human animal interface, including animal related injuries, radiation, chemical aerosols, and therapeutics.
6. Identify the major types and sources of psychosocial hazards at the human animal interface, including compassion fatigue and euthanasia related stress.
7. Describe the major environments where workers are in close contact with animals in both US and global settings.

8. Identify major regulations, agencies, programs, and stakeholders related to biological and physical health hazards and other hazards at the human animal interface.
9. Formulate strategies for preventing, controlling or managing occupational health hazards at the human animal interface using an interdisciplinary One Health team model including exposure control and surveillance.
10. Effectively communicate information about biological and physical health risks and response strategies, both orally and in written form.
11. Formulate research questions related to occupational health at the human animal interface and propose research approaches to address such questions.
12. Understand how socioeconomic and other social factors, including poverty, immigration, literacy, urbanization and racism, affect the health of animal workers.

Texts and References:

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The primary reference text for this course will be:

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Human-Animal Medicine: Clinical Approaches to Zoonoses, Toxicants and Other Shared Health Risks by Peter M. Rabinowitz and Lisa A. Conti. Saunders: Elsevier.

This text book will be on reserve at the Health Sciences Library and at the Center for One Health (COHR) suite, as well as for purchase online from the publisher.

All students are expected to be able to access class materials via email and the course Canvas website. If this presents a problem for you let the instructor know immediately.

Course Requirements:

1. Seminar: Each student will play a principal role in leading or co-leading a seminar session once each quarter.
1. Class Participation: Although students will not be graded on attendance, active engagement in classroom discussions is required to meet many of the learning objectives for the course. Students

should come to the seminar having done the expected preparation (see below), and participate actively in the seminar discussion.

Seminar Schedule: ENVH 586- Fall 2018

| Week # | Date | Seminar Leader | Topic |
|---------------|-----------------|-----------------------|--|
| 1 | 9/27/18 | Rabinowitz | Intro to Seminar, Occupational Health of Animal Workers |
| 2 | 10/4/18 | Schnitzler | Davis Staph |
| 3 | 10/11/18 | Philo, Mereness | Florence |
| 4 | 10/18/18 | Vaughn | Veterinary/Banfield |
| 5 | 10/25/18 | Nachtigal | Pregnancy outcomes |
| 6 | 11/1/18 | Nam | MERS |
| 7 | 11/8/18 | Dostal Conery | RVF |
| 8 | 11/15/18 | Willis | Compassion fatigue |
| 9 | 11/22/18 | -- | No session- Thanksgiving |
| 10 | 11/29/18 | Carmona | Dairy air exposures |
| 11 | 12/6/18 | Marine, Cody | Livestock injuries/behavior |

Seminar Structure (ENV H 586 Fall 2018)

1. Before the Session:

If you are the assigned seminar leader (s):

- Perform a systematic literature search on the topic, with assistance from the UW Health Sciences Library as needed.
- Prepare a presentation on the topic of the week, not to exceed 25 minutes
- Read the paper on the topic that has been assigned by the instructor
- Prepare a 15-25 minute presentation about the paper
- Read and prepare answers to the class questions about the paper that have been posted on Canvas

For all other seminar sessions:

- Please read the assigned paper. Come to the seminar prepared to discuss both what the paper is reporting as well as the methodology used in the paper.
- Post one question on the discussion board regarding the paper by 5pm on the TUESDAY before the session. Questions can relate either to the paper content and/or the study methodology(ies). Make sure you are not duplicating someone else's question.

1. During the Session:

First Half (8:30-9:20):

- The seminar leader will provide a brief overview of the topic- should not take more than 25 minutes.
- The seminar leader will present the study of the week, including methodology, findings, strengths and weaknesses. Not to exceed 25 minutes.

9:20-9:30 There will be a 10-minute break

Second Half (9:30-10:20):

- The rest of the session will consist of discussion of the questions posed by students. The seminar leader should be prepared to lead the discussion.

Basis for Grading:

This course is offered on a graded (A section) basis.

Seminar leadership 70%

Judged on quality of: student preparation; presentation materials; presentation style; and evidence of professionalism and interdisciplinary cooperation, if relevant.

Rubric for Seminar Leadership

| | Poor | Fair | Good | Excellent | Exceptional |
|--|-------------|-------------|-------------|------------------|--------------------|
| Provides good overview of topic, including size of workforce population, specific hazards faced by worker population, current state of knowledge regarding occupational health | 1 | 2 | 3 | 4 | 5 |
| Provides overview of research needs for population | 1 | 2 | 3 | 4 | 5 |
| Provides good overview of study, including study setting and population, methodology used, results and generalizability | 1 | 2 | 3 | 4 | 5 |
| Identifies strengths and weaknesses of study | 1 | 2 | 3 | 4 | 5 |
| Leads discussion based on student posted questions | 1 | 2 | 3 | 4 | 5 |

Description of ratings:

1. Exceptional; Addresses salient points in this section. Insightful presentation/analysis.
2. Excellent; Addresses most of the important points with occasional oversights. Thorough presentation/analysis.
3. Good; Moderate degree of omission of key information. Good presentation/analysis
4. Fair; Frequent omission of key information. Multiple inaccuracies noted. Unprepared presentation/limited analysis.
5. Poor; Does not convey relevant information; did not provide interpretation of data; unprepared presentation

Posting of Questions on Discussion Board Before Sessions: 15%

Consistency and quality of questions posed to the seminar leader before each session, as above.

Class Participation 15%

Based on class participation in discussions.

Assignment of numeric grades will use the UW Department of Health Services grading guidelines for graduate students. More details are available at the course website.

<http://depts.washington.edu/hserv/grading>

3.9-4.0 Excellent and exceptional work.....for a graduate [or professional] student

3.7-3.8 Strong work

3.4-3.6 Competent and sound work (default category)

3.2-3.3 Adequate work, although some weaknesses are evident

2.9-3.1 Borderline work

2.7-2.8 Deficient but acceptable work

<2.7 Unacceptable work

Access and Accommodations:

Your experience in this class is important to me. If you have already established accommodations with Disability Resources for Students (DRS), please communicate your approved accommodations to me at your earliest convenience so we can discuss your needs in this course.

If you have not yet established services through DRS, but have a temporary health condition or permanent disability that requires accommodations (conditions include but not limited to; mental health, attention-related, learning, vision, hearing, physical or health impacts), you are welcome to contact DRS at 206-543-8924 or [uwdrs@uw.edu \(mailto:uwdrs@uw.edu\)](mailto:uwdrs@uw.edu) or disability.uw.edu. (<http://depts.washington.edu/uwdrs/>) DRS offers resources and coordinates reasonable accommodations for students with disabilities and/or temporary health conditions. Reasonable accommodations are established through an interactive process between you, your instructor(s) and DRS. It is the policy and practice of the University of Washington to create inclusive and accessible learning environments consistent with federal and state law.

Academic Integrity

Students at the University of Washington (UW) are expected to maintain the highest standards of academic conduct, professional honesty, and personal integrity.

The UW School of Public Health (SPH) is committed to upholding standards of academic integrity consistent with the academic and professional communities of which it is a part. Plagiarism, cheating, and other misconduct are serious violations of the University of Washington Student Conduct Code (WAC 478-120). We expect you to know and follow the university's policies on cheating and plagiarism, and [the SPH Academic Integrity Policy](http://sph.washington.edu/students/academicintegrity/) (<http://sph.washington.edu/students/academicintegrity/>). Any suspected cases of academic misconduct will be handled according to University of Washington regulations. For more information, see the University of Washington Community Standards and Student Conduct website.

Classroom Climate

The UW School of Public Health seeks to ensure all students are fully included in each course. We strive to create an environment that reflects community and mutual caring. We encourage students with concerns

about classroom climate to talk to your instructor, your advisor, a member of the departmental or SPH Diversity Committee and/or the program director. [DCinfo@uw.edu \(mailto:DCinfo@uw.edu\)](mailto:DCinfo@uw.edu) is a resource for students with classroom climate concerns.

Course Summary:

| Date | Details |
|------|---------|
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