

Course Syllabus

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COURSE DESCRIPTION

One Health is a transdisciplinary systems concept connecting human, animal, and environmental health. Through a case based approach, the course will explore integrated approaches to assessment and control of a number of health issues at the human-animal-environment interface. These issues include emerging zoonotic (transmitted between animals and humans) infectious diseases, animals as sentinels of environmental hazards, health aspects of the human-animal bond, and the comparison of spontaneous diseases between humans and animals (human-animal medicine).

COURSE SCHEDULE

[Class Schedule.pdf](#)  

LEARNING OBJECTIVES

Joint 439 and 539:

On completion of this course, students will be able to:

1. Systematically research assigned topics, as a member of an interdisciplinary problem solving group, to help the group explore human health, animal health, and environmental health aspects of One Health topics.
2. Explain an ecological perspective on the connections among human health, animal health, and ecosystem health.
3. Identify at least four major zoonotic diseases and explain the human, animal, and environmental aspects of these diseases.
4. Describe at least two examples of animals serving as sentinels for human environmental health hazards, and why this phenomenon occurs.
5. Be able to describe the comparative presentation of at least two diseases across at least 3 species (including humans)
6. Identify 4 health effects associated with the human-animal bond and how this can be used in clinical settings.
7. Identify, for at least 3 different One Health scenarios, the relative roles of human health providers, veterinarians, and environmental health professionals.

Graduate level course objectives (539 only):

1. Serve as a team leader for case discussion sessions, helping the group explore the separate perspectives of either human health, animal health, or environmental health professionals.
2. Be able to lead a group in an interdisciplinary discussion about a disease/health issue that incorporates human, animal, and environmental health perspectives. From that discussion be able to formulate and create a written summary with recommendations for an integrated One Health strategy for a) assessing a disease situation with human health, animal health, and environmental aspects and b) managing such a situation, including how data would be used to plan and track such an integrated assessment and intervention.

TEXTS AND REFERENCES

There is no required textbook. The primary recommended text for this course will be:

[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 COHR suite, as well as for purchase through the university book store or online. An electronic version will also be available through the Health Sciences Library (link [here](#) (<http://www.sciencedirect.com.offcampus.lib.washington.edu/science/book/9781416068372>)). Additional reading assignments and course

materials will be provided as handouts by posting on the Canvas site.

The following texts are also recommended references for this course, and will also be available in the Center for One Health (COHR) lab office:

Books

- [One Health: People, Animals, and the Environment](#). ASM Press
- [Confronting Emerging Zoonoses: The One Health Paradigm](#). Yamada, et al. (Eds) Springer
- [Zoobiquity: The Astonishing Connection Between Human and Animal Health](#). Barbara Natterson-Horowitz, B, Bowers K. Vintage Press.
- [One Health: The Human-Animal-Environment Interfaces in Emerging Infectious Diseases](#). Mackenzie, J.S., et al (Eds.).Springer

Recommended Journals (available online through UW [librarie \(http://hsl.uw.edu/\) s](http://hsl.uw.edu/))-

- One Health Journal
- International Journal of One Health
- Emerging Infectious Diseases
- Environmental Health Perspectives
- EcoHealth
- PLoS One

COURSE FORMAT

The course will be divided into 5 modules: Introduction to One Health, Zoonoses, Animals as Sentinels, Human-Animal Bond, and Human Animal Medicine.

Lectures

Most sessions will include an interactive lecture, providing background information on the human, animal, and environmental health aspects of different health issues. Part of the didactic session will provide useful background on the current case being addressed in the group problem sessions, and/or recapping key learning points from the previous case.

Group problem-solving sessions

A central feature of the course will be problem solving sessions based on a case study framework. In general these will consist of a case of the occurrence of a disease problem that needs to be assessed and addressed from a One Health perspective involving human, animal, and environmental health. In most cases the case studies relate to actual research and practice taking place at the UW Center for One Health Research or other related efforts in our region.

Small groups

The case studies will be worked on by the class in small groups consisting of approximately 8 or fewer students. The number and size of teams will be determined by the final class enrollment. Each group will include at least one graduate student. The undergraduates will, for the purpose of each case, be assigned to represent either the human health, animal health, or environmental health aspects of the case. The graduate student will provide leadership in integration of the three perspectives.

Structure of the case- based sessions

1. *Introductory session for each case*

For each case, there will be a brief (approx. 20 minute) didactic introduction to the case, followed by in class group discussion allowing groups to work on developing a strategy for problem solving.

As part of this initial discussion, the undergraduates will be assigned to represent either human, animal, or environmental health aspects of the case. Over the course of the quarter, there will be rotation of these assignments so that each student has the opportunity to research and present from each of the three perspectives (human, animal, and environmental health) at least once in a group problem-solving session.

2. Case problem solving session (s)

Following the introductory session about a case, there will be at least one subsequent problem solving session where students get a chance to work in a group on the case. This will include presentation by the assigned students on the different aspects of the case (human, animal, and environmental), followed by the graduate student in the group leading a team discussion on developing an integrated One Health solution to the case problem.

The following is an example of the schedule for a problem solving session:

- 9:00- 9:15: presentation of human health aspect of case (including answers to case questions) (human health student or subgroup)
- 9:15-9:30: presentation to the group of animal health aspect of case (including answers to case questions) (animal health student or subgroup)
- 9:30-9:45: presentation to the group of environmental health aspect of case (including answers to case questions) (environmental health student or subgroup).
- 9:45-10:20: With the graduate student leading, group comes up with a One Health strategy for resolving the problem and tracking the impact of the intervention (2 paragraphs, typically due by Friday of that week)

A short write-up (1-3 pages) of the group assessment and problem solving strategy will be due following the last problem session for that case.

Grading of small group sessions:



At the conclusion of each session, each group will submit one write-up. Undergraduate students will each contribute sections for their specialty, which the graduate student will then edit, synthesize, and submit. One grade will be assigned to all group members for this write up. Undergraduate students are expected to submit their sections to the graduate student at least 48 hours before the final write-up is due.

Field trips

Two optional fieldtrips are planned, one to the animal health clinic of the Woodland Park Zoo, and one to the medical unit of a local wildlife rehabilitation facility. These will take place outside of scheduled class time.

Students may attend one or the other trip (not both). When both trips are finalized we will create a lottery for students to choose which trip they would like to take, if they are able to take either trip.

Woodland Park Zoo: Thursday, May 11, 1:30PM

Students will be responsible for their own transportation to the zoo; bus 43 or 44 can be taken from Magnuson Health Sciences, or you can park in the Hippo lot or find street parking ([Zoo map](#)  .

Once you have arrived, please walk around the Rose Garden to the hospital.

It is really important that you are on time! The front door is kept locked, so latecomers may not be able to get in.

Sarvey Wildlife Care Center: Friday, May 12th, 1:00PM

We will be providing transportation to students attending this trip, and will leave South Campus Center promptly at 12:00pm.

Therapy animal visit

During one of the final class periods, there will a visit to the class by an animal therapy team.

GRADING OPPORTUNITIES

This course is offered on both a graded (A section) and credit/no credit (B section) basis. The expected student contribution to the course is identical whichever grading status is chosen.

Grading guidelines

The instructor will provide evaluation-grading rubrics (based on the course learning objectives) in advance for all major assignments. Grading guidelines are adapted from the Department of Health Services [guidelines](http://depts.washington.edu/hserv/grading) (<http://depts.washington.edu/hserv/grading>):

- **3.9-4.0: Excellent and exceptional work (for a graduate student)**
 - Work at this level is unusually thorough, well-reasoned, sophisticated, and well-written. Work shows an incisive understanding of issues, and demonstrates clear recognition of appropriate approaches to address problems and questions.
- **3.7-3.8: Strong work**
 - Work at this level is thorough and well-reasoned, indicates strong understanding of appropriate approaches to address problems and questions, and demonstrates clear recognition and good understanding of salient issues and problems.
- **3.4-3.6: Competent and sound work...**
 - Work at this level is thorough and well-reasoned, and shows sound understanding of appropriate approaches to address problems and questions. Shows adequate understanding of issues and problems. Minor misunderstandings or errors may (or may not) be present.
- **3.2-3.3: Adequate work, although some weaknesses are evident**
 - Work at this level is moderately thorough and well-reasoned, but understanding of the important issues is less than complete. Approaches to address problems and questions are generally adequate. However, the work has one or more weaknesses or limitations.
- **2.9-3.1: Borderline work...**
 - Work at this level meets minimal expectations. Understanding of salient issues is incomplete. Approaches to address problems and questions are minimally adequate. The work has substantial weaknesses or limitations.
- **2.7-2.8: Deficient but acceptable work**
 - Work at this level does not meet minimal expectations. Work is inadequately developed or flawed by numerous errors and misunderstanding of important issues. Approaches to address problems and questions are weak and fail to demonstrate expected knowledge or competence.
- **<2.7: Unacceptable work**
 - For graduate students, work below this level is graded relative to performance expected for an undergraduate student.

Participation

Class sessions will include lectures and group problem-solving sessions. Although attendance in lectures is not expressly required, students will be encouraged and expected to participate in classroom discussions during lecture sessions and group problem solving sessions. Students will not have the opportunity to earn class participation credit for course periods during which they are absent.

Participation Expectations:

- **Excellent (4.0):** consistent class preparation and attendance and active in class discussions
- **Adequate (3.0):** regular class attendance and frequent participation in discussions
- **Borderline (2.5):** inconsistent attendance, less active participation in discussions
- **Unacceptable:** minimal preparation and attendance, minimal participation in discussions

Undergraduate Level (439) expectations:

Class Participation in lectures (10%):

Students may earn class participation credits by participating in classroom discussions (asking and answering questions).

Participation in group problem solving (50% in total- see following breakdown):

Students will be judged on their degree and excellence of participation in group problem solving sessions in the following way:

- 35%: Grade for group write-up (see above)
- 15%: Participation evaluation: 439 students will be evaluated on the basis of their preparation for and participation in group problem-solving sessions and write-ups. Evaluation will be provided by other undergraduate student group members, the graduate student group member, and course instructors. More detail on peer evaluation will be provided during the first week of class

Graduate Level (539) expectations:

Class Participation in lectures (10%):

Students may earn class participation credits by participating in classroom discussions (asking and answering questions).

Participation and leadership in group problem solving (50% in total—see following breakdown):

Graduate students will be judged on their degree and excellence of participation in group problem in the following way:

- 35%: Grade for group write-up (see above)
- 15%: Participation evaluation: 539 students will be evaluated on the basis of their leadership and participation in group problem-solving. Evaluation will be provided by undergraduate student group members and course instructors. More detail on peer evaluation will be provided during the first week of class.

Midterm exam (15%)

The midterm exam will be a timed, open-book examination administered on Canvas. Students are expected to work independently on this exam.

The midterm will become available at **9am on Tuesday, April 25th**, and the last date/time to submit will be **11pm on Thursday, April 26th**.

Final exam (25%)

The final exam will also be a timed, open-book examination administered on Canvas. Students are expected to work independently on this exam.

ACADEMIC INTEGRITY

Students at the University of Washington 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. 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.

ACCESS AND ACCOMMODATIONS

The student experience in this class is important to me (Peter Rabinowitz, instructor). 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, you are welcome to contact DRS at 206-543-8924 or uwdrs@uw.edu or disability.uw.edu. Qualifying conditions include but are not limited to mental health, attention-related, learning, vision, hearing, physical or health impacts. 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 and DRS. It is policy and practice of the University of Washington to create inclusive and accessible learning environments consistent with federal and state law.

DIVERSITY, INCLUSION, AND RESPECT

Diverse backgrounds, embodiments and experiences are essential to the critical thinking endeavor at the heart of university education. Therefore, I expect you to follow the UW Student Conduct Code in your interactions with your colleagues and me in this course, by promoting an inclusive environment and respecting the many social and cultural differences among us. These may include but are not limited to: race, ethnicity, age, cultural background, disability, family status, gender identity and presentation, citizenship and immigration status, national origin,










religious and political beliefs, sex, sexual orientation, socioeconomic status, and veteran status.

Please talk with me right away if I fail to meet these or your expectations, or if you experience or witness disrespect in this class. I will work promptly to address it in a constructive and educational manner, while assuring your privacy. Alternatively, you could communicate your concerns through the Graduate Program director (Richard Fenske, rfenske@uw.edu) or Ms. Trina Sperry, or your chosen contact person in your department or the Dean'

ADDITIONAL COURSE GUIDELINES

1. Come to class; please let me know ahead of time if you cannot make it.
2. Arrive on time
3. Work effectively with your student small group team to prepare group problem-solving presentations.
4. Come to lectures prepared (keep up with reading)
5. Be courteous (No newspapers, audible cell phones, PDAs, beepers)
6. Food and drinks are welcome (but keep it quiet)
7. Refrain from unnecessary talking, but ASK QUESTIONS
8. Let me know how the instructors re doing (if we are moving too fast, not being clear, or otherwise not getting the message across, we need to know.)

Course Summary:

Date	Details	
Wed Mar 29, 2017	 Readings for Wednesday 3.29 (https://canvas.uw.edu/courses/1139032/assignments/3645196)	due by 11:59pm
Mon Apr 3, 2017	 Readings for Monday 4.3 (https://canvas.uw.edu/courses/1139032/assignments/3645177)	due by 11:59pm
Wed Apr 5, 2017	 Readings for Wednesday 4.5 (https://canvas.uw.edu/courses/1139032/assignments/3705035)	due by 11:59pm
Mon Apr 10, 2017	 Case study: One Health Dairy (https://canvas.uw.edu/courses/1139032/assignments/3645182)	due by 11:59pm
	 Readings for Monday 4.10 (https://canvas.uw.edu/courses/1139032/assignments/3645215)	due by 11:59pm
Wed Apr 12, 2017	 Readings for Wednesday 4.12 (https://canvas.uw.edu/courses/1139032/assignments/3645216)	due by 11:59pm
Mon Apr 17, 2017	 Case study: Bats/Salmonella (https://canvas.uw.edu/courses/1139032/assignments/3645183)	due by 11:59pm
	 Readings for Monday 4.17 (https://canvas.uw.edu/courses/1139032/assignments/3647289)	due by 11:59pm
Wed Apr 19, 2017	 Readings for Wednesday 4.19 (https://canvas.uw.edu/courses/1139032/assignments/3716635)	due by 11:59pm

Mon Apr 24, 2017	<ul style="list-style-type: none"> Case study: E. coli O157 	due by 11:59pm
	<ul style="list-style-type: none"> Readings for Monday 4.24 	due by 11:59pm
Thu Apr 27, 2017	<ul style="list-style-type: none"> Extended Midterm 	due by 11pm
	<ul style="list-style-type: none"> Midterm 	due by 11pm
Wed May 3, 2017	<ul style="list-style-type: none"> Readings for Wednesday 5.3 	due by 11:59pm
Mon May 8, 2017	<ul style="list-style-type: none"> Case study: Conservation medicine 	due by 11:59pm
	<ul style="list-style-type: none"> Readings for Monday 5.8 	due by 11:59pm
Tue May 9, 2017	<ul style="list-style-type: none"> Peer evals: Conservation medicine 	due by 11:59pm
Mon May 15, 2017	<ul style="list-style-type: none"> Case study: Coccidioidomycosis 	due by 11:59pm
	<ul style="list-style-type: none"> Readings for Monday 5.15 	due by 11:59pm
Mon May 22, 2017	<ul style="list-style-type: none"> Case study: Skin microbiome 	due by 11:59pm
	<ul style="list-style-type: none"> Readings for Monday 5.22 	due by 11:59pm
Wed May 31, 2017	<ul style="list-style-type: none"> Case study: Homeless/pets 	due by 11:59pm
	<ul style="list-style-type: none"> Readings for Wednesday 5.31 	due by 11:59pm
Mon Jun 5, 2017	<ul style="list-style-type: none"> Extra Credit Field Trip Assignment 	due by 11:59pm
	<ul style="list-style-type: none"> Final Exam 	due by 11:59pm
	<ul style="list-style-type: none"> Bats/Salmonella Participation 	
	<ul style="list-style-type: none"> Class participation grade 	
	<ul style="list-style-type: none"> Coccidioidomycosis Participation 	
	<ul style="list-style-type: none"> Completion of bats/Salmonella peer eval 	
	<ul style="list-style-type: none"> Completion of E. Coli O157:H7 peer eval 	

<https://canvas.uw.edu/courses/1139032/assignments/3727109>)

📅 [Completion of every peer review](#)
(<https://canvas.uw.edu/courses/1139032/assignments/3727241>)

📅 [Completion of One Health Dairy peer eval](#)
(<https://canvas.uw.edu/courses/1139032/assignments/3727107>)

📅 [Conservation medicine Participation](#)
(<https://canvas.uw.edu/courses/1139032/assignments/3704493>)

📅 [E. Coli O157 Participation](#) (<https://canvas.uw.edu/courses/1139032/assignments/3704492>)

📅 [Extra point](#) (<https://canvas.uw.edu/courses/1139032/assignments/3731082>)

📅 [Homeless/pets Participation](#) (<https://canvas.uw.edu/courses/1139032/assignments/3704524>)

📅 [One Health Dairy Participation](#) (<https://canvas.uw.edu/courses/1139032/assignments/3704446>)

📅 [Skin microbiome Participation](#) (<https://canvas.uw.edu/courses/1139032/assignments/3704523>)
