

Spring 2022  ENV H 442



# ZOONOTIC DISEASES & THEIR CONTROL

## MEETING TIMES & LOCATION

2:30pm – 3:50pm

Wednesday (Virtual: Zoom) & Friday (In-Person: HRC 145)

## INSTRUCTOR

Emily Hovis, Assistant Teaching Professor

Department of Environmental & Occupational Health Sciences (DEOHS)

Email: [ehovis@uw.edu](mailto:ehovis@uw.edu)

Office Hours: By Appointment

## COURSE DESCRIPTION

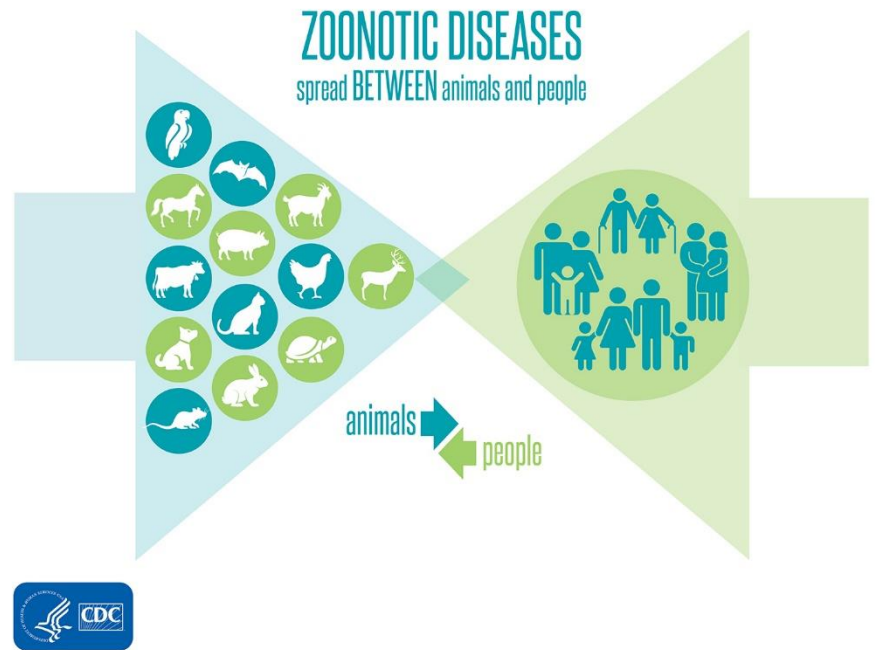
In this course we study zoonotic diseases (zoonoses) and the role that animals play as reservoirs, hosts, and vectors – both locally and globally. Students will learn about vector borne diseases of public health significance and general strategies for identification, surveillance, and control of common animal reservoirs and vectors including bats, rodents, flies, roaches, bedbugs, mosquitoes, and ticks. This course has a particular focus on the role environmental health professionals play in preventing zoonoses in their communities and explores potential career paths in the field of zoonotic disease.

# ENVH 442: ZOOBOTIC DISEASES COURSE SYLLABUS

## LEARNING GOALS

Upon completion of this course, students should be able to:

1. Recognize, characterize, and categorize zoonotic disease reservoirs, vectors, and hosts.
2. Describe the causes, signs, symptoms, and importance of the vector-borne diseases of public health significance – regionally, nationally, and internationally.
3. Identify and describe control methods that are employed to minimize zoonotic disease risk from various vectors.
4. Summarize and discuss integrated pest management (IPM) principles and other control strategies.



5. Discuss zoonotic disease outbreak investigation, response, and appropriate control measures.

## COURSE FORMAT

This course will be offered using a flipped classroom model with one class session occurring online through Zoom and the other class session occurring in person on campus. In-person class sessions will primarily focus on application of concepts through discussions, group activities, and field trips; with a particular emphasis on case studies. Students are expected to come to class prepared for the day, having reviewed content independently on Canvas (such as recorded lectures, readings, etc.) in advance of scheduled class time. Questions and comments on the subject matter are encouraged.

Subject matter experts will provide guest lectures throughout the course. These special guests are invited to give students a different perspective and provide an opportunity for students to learn about several real-world career paths in the field of zoonotic disease and vector control. Students are encouraged to engage with these special guests through discussion and questioning.

## GRADING / ASSESSMENT OF LEARNING

All quizzes, assignments and assessments (with few exceptions) must be submitted through Canvas by the due date. Late submissions will face a 2% penalty for each day they are late for a maximum of 50%. Your final grade will be calculated based on the following:

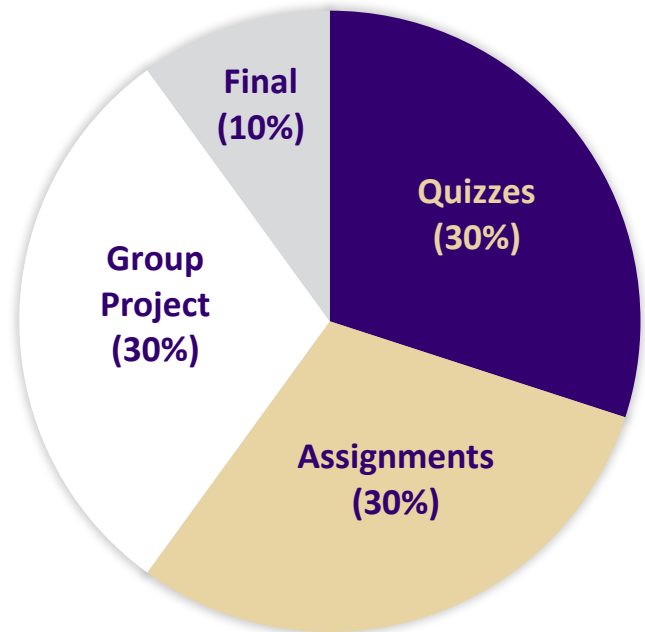
**Weekly Quizzes (30%):** Quizzes will be available through Canvas and will cover key content from the readings, lectures, activities and discussions. These are designed to keep you engaged in the material and to help you (and me!) assess whether you are learning as you go.

**Assignments (30%):** Assignments will help students stay on track, understand and remember key points, and provide the opportunity to apply learning, evaluate evidence, synthesize material, and make connections between topics. Most assignments will be submitted electronically through Canvas or in-class. Example assignments are provided below:

- **Book Readings & Discussion:** Students will read *Spillover: Animal infections and the next human pandemic* and complete a short Canvas quiz most weeks. Each student will then lead a group discussion about their chapter once during the quarter.
- **Guest Lecture Summaries:** For each guest lecture, students will write a short summary (a few sentences) reflecting on what they learned and any unresolved questions.
- **Tick Surveillance Field Trip:** Students are required to participate in one field trip during the course and submit a written reflection.

**Group Project – Urban Rodent Survey (30%):** The class will be divided into several teams that will conduct an actual rodent survey of a Seattle neighborhood. Each group will prepare a final report and present the results, characterizing the nature and extent of the rodent problems found and presenting detailed recommendations for corrective action(s).

**Final Assessment (10%):** The final assessment will be available through Canvas during finals week. Questions will include multiple choice, true-false, fill-in-the-blank and short-answer based on Canvas videos/readings, class discussions, activities, field trips and the course objectives. These are open book, open note examinations.



A 4.0 scale will be calculated using the following conversion:

4.0 Scale	Percentage	4.0 Scale	Percentage	4.0 Scale	Percentage
4.0	≥98.0%	2.8	<84.7%	1.6	<71.2%
3.9	<97.0%	2.7	<83.5%	1.5	<70.1%
3.8	<95.9%	2.6	<82.4%	1.4	<69.0%
3.7	<94.8%	2.5	<81.3%	1.3	<67.8%
3.6	<93.6%	2.4	<80.2%	1.2	<66.7%
3.5	<92.5%	2.3	<79.1%	1.1	<65.6%
3.4	<91.4%	2.2	<77.9%	1.0	<64.5%
3.3	<90.3%	2.1	<76.8%	0.9	<63.4%
3.2	<89.2%	2.0	<75.7%	0.8	<62.2%
3.1	<88.0%	1.9	<74.6%	0.7	<61.1%
3.0	<86.9%	1.8	<73.5%	0.0	<60.0%
2.9	<85.8%	1.7	<72.3%		

Table 1 - 4.0 Scale to Percentage and Letter Grade Conversion

## COURSE MATERIALS

An overview of course materials will be available on Canvas as the first page in the weekly module. This overview will describe weekly learning objectives and list things 'to do' before coming to class:



**To Read or View - Required Readings & Videos:** This section includes pages of foundational content with links to readings and videos that are designed to enrich your learning experience. These materials are required to be read before coming to class.



**To Complete and Submit – Required Quizzes & Assignments:** This section includes a list of quizzes and assignments that should be submitted by the listed due date. These assignments must be submitted/uploaded to Canvas before coming to class.

**Required Books/Manuals:** All students will be required to read the following during the course:

- **Spillover: Animal infections and the next human pandemic.** Quammen, D. (2012). New York: W. W. Norton & Company. It is available for purchase online or from the [UW library](#).
- **Surveillance and Control of Aedes aegypti and Aedes albopictus in the United States.** Center for Disease Control and Prevention. The full text is available for free [online](#).
- **Integrated Pest Management: Conducting Urban Rodent Surveys.** Center for Disease Control and Prevention. The full text is available for free [online](#).
- **Tickborne Diseases of the United States.** Center for Disease Control and Prevention. The full text is available for free [online](#).

# ENVH 442: ZONOTIC DISEASE TENTATIVE SCHEDULE

**Disclaimer:** The syllabus, readings, and/or lecture schedule are all subject to change. Any changes will be announced in class and posted on Canvas.

WEEK	DATE	MODALITY	SUBJECT
1	Weds. 3/30	In-Person	<b>Course Introduction</b>
	Fri. 4/1	In-Person	<b>Introduction to Zoonotic Disease (Zoonoses)</b>
2	Weds. 4/6	Zoom	<b>Foodborne Zoonoses</b>
	Fri. 4/8	In-Person	<b>Animal Feed &amp; Food Safety</b> <i>Guest Lecture – Ashlee-Rose Ferguson with the Washington State Department of Agriculture <a href="#">Animal Feed Program</a></i>
3	Weds. 4/13	Zoom	<b>Introduction to Integrated Pest Management (IPM)</b>
	Fri. 4/15	In-Person	<b>Rodent Biology &amp; Control</b>
4	Weds. 4/20	Zoom	<b>Rodent-borne Diseases</b>
	Fri. 4/22	In-Person	<b>Zoonotic Disease Outbreak and Illness Investigations</b> <i>Guest Lecture – Beth Lipton with the Public Health – Seattle &amp; King County <a href="#">Zoonotic Disease Program</a></i>
5	Weds. 4/27	Zoom	<b>Bats as Reservoirs for Disease</b>
	Fri. 4/29	In-Person	<b>Malaria</b> <i>Guest Lecture – <a href="#">Dr. Pappaioanou</a> w/ UW DEOHS</i>

# ENVH 442: ZOO NOTIC DISEASE SCHEDULE (CONTINUED)

**Disclaimer:** The syllabus, readings, and/or lecture schedule are all subject to change. Any changes will be announced in class and posted on Canvas.

WEEK	DATE	MODALITY	SUBJECT
6	Weds. 5/4	Zoom	<b>Mosquito Biology &amp; Control</b>
	Fri. 5/6	In-Person	<b>Mosquito-borne Diseases</b>
7	Weds. 5/11	Zoom	<b>Food &amp; Housing Pests: Flies, Roaches &amp; Bedbugs</b>
	Fri. 5/13	In-Person	<b>Food &amp; Housing Inspections</b> <i>Guest Lecture</i> – Doug Hatfield with the Washington State Department of Health <a href="#">Transient Accommodations Program</a>
8	Weds. 5/18	Zoom	<b>Tick Biology &amp; Control</b>
	Fri. 5/20	In-Person	<b>Tick-borne Diseases</b>
9	Weds. 5/25	Zoom	<b>Vectors &amp; Disease Surveillance in Washington State</b> <i>Guest Lecture:</i> Dr. Dykstra with the Washington State Department of Health <a href="#">Zoonotic Disease Program</a>
	Fri. 5/27	In-Person	<b>Tick Surveillance Field Trip</b>
10	Weds. 6/1	In-Person	<b>Urban Rodent Survey Group Presentations</b>
	Fri. 6/3	In-Person	<b>Group Presentations Continued &amp; Course Wrap-Up</b>
11	<b>FINAL ASSESSMENT ON CANVAS</b>		

# COURSE POLICIES

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## 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](#). 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.

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## ACCESS & ACCOMODATION

Your experience in this class is important to me. It is the policy and practice of the University of Washington to create inclusive and accessible learning environments consistent with federal and state law. If you have already established accommodations with Disability Resources for Students (DRS), please activate your accommodations via myDRS so we can discuss how they will be implemented 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), contact DRS directly to set up an Access Plan. DRS facilitates the interactive process that establishes reasonable accommodations. Contact DRS at [disability.uw.edu](mailto:disability.uw.edu).

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## BIAS CONCERNS

The Office of the Dean has a [student concern policy](#), a faculty concern policy and standard HR procedures for staff concerns. Our 2018 climate survey states that most people in SPH do not report bias incidents because they do not know where to go. Students are encouraged to report any incidents of bias to someone they feel comfortable with, including instructors, advisers or department staff. They can email [dcinfo@uw.edu](mailto:dcinfo@uw.edu) for immediate follow up. Bias concerns can be anonymously and confidentially reported at this link <https://sph.washington.edu/about/diversity/bias-concerns>. Data is collected by the Assistant Dean for EDI and the Director of Program Operations for Student and Academic Services and tracked for resolution and areas are identified for further training.

## CLASSROOM CLIMATE

We are co-creators of our learning environment. It is our collective responsibility to develop a supportive learning environment for everyone. Listening with respect and an open mind, striving to understand others' views, and articulating your own point of view will help foster the creation of this environment. We engage our differences with the intent to build community, not to put down the other and distance our self from the other. Being mindful to not monopolize discussion and/or interrupt others will also help foster a dialogic environment.

### **The following guidelines can add to the richness of our discussion:**

- We assume that persons are always doing the best that they can, including the persons in this learning environment.
- We acknowledge that systematic oppression exists based on privileged positions and specific to race, gender, class, religion, sexual orientation, and other social variables and identities.
- We posit that assigning blame to persons in socially marginal positions is counter-productive to our practice. We can learn much about the dominant culture by looking at how it constructs the lives of those on its social margins.
- While we may question or take issue with another class member's ideology, we will not demean, devalue, or attempt to humiliate another person based on her/his experiences, value system, or construction of meaning.
- We have a professional obligation to actively challenge myths and stereotypes about our own groups and other groups so we can break down the walls that prohibit group cooperation and growth. [Adapted from Lynn Weber Cannon (1990). Fostering positive race, class and gender dynamics in the classroom. *Women Studies Quarterly*, 1 & 2, 126-134.]

We are a learning community. As such, we are expected to engage with difference. Part of functioning as a learning community is to engage in dialogue in respectful ways that supports learning for all of us and that holds us accountable to each other. Our learning community asks us to trust and take risks in being vulnerable.

### **Here are some guidelines that we try to use in our learning process:**

- LISTEN WELL and be present to each member of our group and class.
- Assume that I might miss things others see and see things others miss.
- Raise my views in such a way that I encourage others to raise theirs.
- Inquire into others' views while inviting them to inquire into mine.
- Extend the same listening to others I would wish them to extend to me.
- Surface my feelings in such a way that I make it easier for others to surface theirs.
- Regard my views as a perspective onto the world, not the world itself.
- Beware of either-or thinking.
- Beware of my assumptions of others and their motivations.
- Test my assumptions about how and why people say or do things.
- Be authentic in my engagement with all members of our class.



## COVID-RELATED EXPECTATIONS

Per UW policy, this class will be conducted in person. You should only register for this class if you can attend in person, or if you meet the criteria for an accommodation from Disability Resources for Students (DRS) or a special arrangement approved by the SPH Office of the Dean that allows you to take the course remotely.

- Please contact UW Disability Resources for Students (DRS) directly if you feel you may be eligible for an accommodation based on your status as an immunocompromised individual or based on other diagnosed physical or mental health conditions that might prevent you from being able to take classes in-person.
- If you are a student enrolled in a program in SPH, and you are either living with an individual who is immunocompromised, OR you are unable to obtain a visa to travel to the US, you may be eligible for a “special arrangement” that will allow you to take this course remotely. To further clarify, immunocompromised refers to individuals with no/critically weakened immune response to the vaccines. Immune compromised is not the same as underlying health concerns which may lead to a more severe response to COVID. Requests for special arrangements to take the class remotely should have been submitted to and approved by the Students and Academic Services team in the Office of the Dean before the beginning of the quarter.

All UW students are expected to complete their vaccine attestation before arriving on campus. Per President Cauce’s message March 8, following changes to state and local health policies, masks will become optional inside most University facilities starting March 28, the first day of spring quarter. Masks will continue to be required in clinical and other health-care settings and on public transportation, including UW shuttles. We strongly recommend wearing masks indoors during the first two weeks of spring quarter. Please monitor yourself daily for symptoms and stay home if you are sick. It’s also strongly recommended to get tested after travel. Refer to the UW Face Covering Policy for the latest guidance and follow the campus-wide face-covering policy at all times. You are expected to follow state, local, and UW COVID-19 policies and recommendations. If you feel ill or exhibit possible COVID symptoms, you should not come to class. If you need to temporarily quarantine or isolate per CDC guidance and/or campus policy, you are responsible for notifying your instructors as soon as possible by email. **If you receive a positive COVID-19 test result, you must report to campus Environmental Health & Safety (EH&S) by emailing [covidehc@uw.edu](mailto:covidehc@uw.edu) or calling 206-616-3344.**

**Please check your email daily BEFORE coming to class.** If we need to conduct class remotely because the instructor or a guest speaker is complying with UW policies and unable to attend in person, we will send all registered students an email with a Zoom link for remote instruction.

## **EQUITY, DIVERSITY AND INCLUSION**

Diverse backgrounds, embodiments and experiences are essential to the critical thinking endeavor at the heart of University education. In SPH, students are expected:

1. To respect individual differences, which may include, but are not limited to, age, cultural background, disability, ethnicity, family status, gender, immigration status, national origin, race, religion, sex, sexual orientation, socioeconomic status and veteran status.
  2. To engage respectfully in the discussion of diverse worldviews and ideologies embedded in course readings, presentations and artifacts, including those course materials that are at odds with personal beliefs and values.
  3. To encourage students with concerns about classroom climate to talk to their instructor, adviser, a member of the departmental or SPH EDI Committee, the Assistant Dean for EDI, or the program's director.
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## **LATE ASSIGNMENT POLICY**

All quizzes, assignments and assessments (with few exceptions) must be submitted through Canvas by the due date. Late submissions will face a 2% penalty for each day they are late for a maximum of 50%.

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## **NOTICE TO STUDENTS – USE OF PLAGIARISMS DETECTION SOFTWARE**

The University has a license agreement with SimCheck, an educational tool that helps prevent or identify plagiarism from Internet resources. Your instructor may use the service in this class by requiring that assignments are submitted electronically to be checked by SimCheck. The SimCheck Report will indicate the amount of original text in your work and whether all material that you quoted, paraphrased, summarized, or used from another source is appropriately referenced.

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## **PERSONAL PRONOUNS**

We share our pronouns because we strive to cultivate an inclusive environment where people of all genders feel safe and respected. We cannot assume we know someone's gender just by looking at them. So, we invite everyone to share their pronouns.

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## **RECORDING OF REMOTE CLASS SESSIONS**

This course is scheduled to run synchronously at the scheduled class time via Zoom one day per week. These Zoom class sessions may be recorded. The recording will capture the presenter's audio, video and computer screen. Student audio and video will be recorded if they share their computer audio and video during the recorded session. The recordings will only be accessible to students enrolled in the course to review materials. These recordings will not be shared with or accessible to the public. The University and Zoom have FERPA-compliant agreements in place to protect the security and privacy of UW Zoom accounts. Students who do not wish to be recorded should change their Zoom screen name to hide any personal identifying information such as their name or UW Net ID, and not share their computer audio or video during their Zoom sessions.

## RELIGIOUS ACCOMMODATIONS

Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The UW's policy, including more information about how to request an accommodation, is available at [Religious Accommodations Policy](#). Accommodations must be requested within the first two weeks of this course using the [Religious Accommodations Request form](#).

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## SAFETY

Call SafeCampus at 206-685-7233 anytime – no matter where you work or study – to anonymously discuss safety and well-being concerns for yourself or others. SafeCampus's team of caring professionals will provide individualized support, while discussing short- and long-term solutions and connecting you with additional resources when requested.

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## SEXUAL HARASSMENT

Sexual harassment is a form of harassment based on the recipient's sex that is characterized by:

1. Unwelcome sexual advances, requests for sexual favors, or other verbal or physical conduct of a sexual nature by a person who has authority over the recipient when:
  - Submission to such conduct is an implicit or explicit condition of the individual's employment, academic status, or ability to use University facilities and services, or
  - Submission to or rejection of the conduct affects tangible aspects of the individual's employment, academic status, or use of University facilities.
2. Unwelcome and unsolicited language or conduct that creates an intimidating, hostile, or offensive working or learning environment, or has the purpose or effect of unreasonably interfering with an individual's academic or work performance.

If you believe that you are being harassed, or have observed harassment, you can report it to SPH using the bias concerns link. The University also has designated offices to help you: [SafeCampus](#); [Office of the Ombud](#); [Title IX Investigation Office](#); and [University Complaint Investigation and Resolution Office](#).

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## SPH LAND ACKNOWLEDGEMENT

The University of Washington acknowledges the Coast Salish people of this land, the land which touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip and Muckleshoot nations.

## WRITING RESOURCES

All written assignments for this class must be high quality, well researched, well organized, and well written. Use plain language instead of jargon. The instructors will consider the clarity of writing when grading assignments. Writing is an important transferable skill for all career pathways. Establishing a strong foundation in writing skills will help students be successful throughout their future course work and career. Therefore, this course includes written assignments with the goal to helping students identify areas of strength and improvement in writing. However, if a student feels that they could benefit from additional opportunities to improve their writing skills, a list of resources at the UW and others accessible online can be found on the SPH website (<https://sph.washington.edu/sites/default/files/inline-files/Writing-Resources-4.3.19.pdf>) and on the DEOHS intranet (<https://portal.deohs.washington.edu/index.php/academic-support-writing-resources>).