**ENVH 583: Environmental Health Reading: Thesis Research Proposal Preparation**
Spring 2023

# Course Information

**Course Instructor:**
Lianne Sheppard, PhD (she/her), Rohm & Haas Endowed Professor
Hans Rosling Center for Population Health, Room 263
Tel. 206-616-2722
E-mail: sheppard@uw.edu

**Course TA:** Annie Doubleday (she/her); E-mail: doubleda@uw.edu

**Office Hours:** By appointment. For assistance scheduling, email Mary Saucier saucier@uw.edu

**Course times and locations:** Thursdays 1:30 - 2:20 p.m., HSEB 235 (or Zoom as needed)

**Course Goals**: The primary goal of this 1-credit class is to empower student research through development of research skills, including its emphasis on writing and critiquing research proposals. This course is open to DEOHS students developing Master's thesis or MPH projects as well as PhD students who wish to develop a dissertation or independent research proposal in a structured setting. All enrolled students are required to sign up concurrently for 2 credits of ENVH 700 (or 600) with a faculty advisor who will actively support the proposal development process. The single credit for ENVH 583 is insufficient to support the work needed to develop a good quality proposal. Further, some of the assignments recommend mentor input and the 600- or 700-level credits provide the mechanism for ensuring that input will occur.

During this quarter, students will develop a research or project proposal. ENVH 583 provides milestones for the proposal development process; the development will occur outside of class. Integrated into these milestones are recommendations to meet with and obtain feedback from the student's mentor about the research project and proposal.

Students will review components of research proposals and practice developing effective aims, hypotheses, background materials and analytic strategies. In addition to preparing a complete proposal for his or her research project, there are a few additional requirements including reading assigned materials, reflections about readings, and conducting peer reviews. The final project for the course will be a peer review "study section" modeled after the NIH peer review process.

**Class Website:** https://canvas.uw.edu/courses/1633874

**Class Session Zoom Link:**     **Meeting ID**: 953 2121 8646

https://washington.zoom.us/j/95321218646     **Note:** Authenticate with your UW NetID to join

**Class Sessions and Learning Remotely**: The basic structure of this course is 50 minutes of lecture and/or discussion. This course will have both synchronous and asynchronous options. You are encouraged to participate synchronously as much as possible.

**Course Communication:**
- **Course updates** will be posted on Canvas. Please make sure your Announcements setting on Canvas is "Notify Immediately".
- **Discussion board**: This is an excellent mechanism for students to get their questions answered and for all students to be able to support each other in this process. It is very likely that other students will have the same question as you, and sharing your questions this way will benefit everyone in the course.
- **Email the instructor:** I will strive to answer within 48 hours on weekdays.

## About the Course

**Learning Objectives:** At the end of this course students should be able to:

- Identify and create the key components of a research proposal
- Demonstrate the ability to conduct literature reviews and gather the critical scientific information related to the research proposal
- Formulate hypotheses and design experiments to test such hypotheses aimed at advancing knowledge in environment and health sciences
- Demonstrate writing skills by producing, a clear, concise research proposal with scientifically defensible aims and research approach (methods, analysis plan, expected benefits, limitations)
- Develop the skills to objectively review and write a scientific critique of a colleague's proposal
- Describe the important concepts related to using human subjects in scientific research
- Describe the underlying concepts and principles of scientific misconduct and plagiarism
- Feel empowered to embark on and carry out an independent research project with guidance from a mentor

**What ENVH 583 will and won't provide, and strategies for success in ENVH 583**

*ENVH 583 will*
- Provide structure and deadlines to support your development of a research proposal
- Provide you with opportunities to support your peers through  the  Canvas peer review process
- Guide you through proposal writing steps and the "study section" scientific peer review process
- Cover a few additional topics, such as research integrity and analysis planning
- Provide resources that will be useful for you in carrying out your research and in supporting your career development

*ENVH 583 won't*
- Provide guidance to support your identification of a research topic
- Assess the quality of your research topic, other than through the Canvas and scientific peer reviews
- Teach skills in specialized topic areas such as qualitative or survey research methods
- Substitute for the one-on-one work you should be doing with your mentor
- Teach writing skills, other than through peer review and editing feedback

*Strategies for success.*  To maximize your success in this class you are encouraged to:
- Have a solid research topic concept by the start of the quarter and write a strong first draft of your specific aims by week 2
- Actively engage with your research mentor throughout the quarter
- Use the course structure and complete the assignments to support your progress
- Look ahead to skills and challenges you will confront in future years and take advantage of the course resources and recommendations to facilitate your future work.  For example, take your analysis planning seriously even if you don't feel ready to embark on a data analysis.

**Requirements and Grading:** ENVH 583 has three assignment groups:  1) *required assignments*, 2) *other required assignments – 6 required; the rest may be dropped*, and 3) *optional assignments*. In brief, to get credit in this course, the student will turn in all required assignments, including a complete research proposal, two written proposal critiques and participation in the "study section" scientific peer review.    Of particular note:

1) **Hand in a complete research proposal during quarter week 10**.  See the proposal format guide for details. Students are asked to turn in intermediate proposal drafts during the quarter; these will receive feedback from the course reader and are intended to support student progress.
2) **Participate in the "Study Section" scientific peer review of other student proposals**.  The class will be divided into two or more peer review groups or "study sections". Each group will review the proposals from all students in another group. Students will follow written instructions, briefly summarized here:
- Each student will:
    - Write and present critiques of two proposals following the critique template
    - Consider and score all proposals in their section
    - Turn in their scores and written critiques
- Study section etiquette:
    - Focus on making constructive comments that will help your peers improve their research and write-up
    - Keep details of the peer review confidential – specific discussions and scores should not be shared outside of the "study section" discussion
- After the meeting, each student will receive feedback from study section:
    - Written critiques from two peers
    - A summary evaluation from the instructor and course reader
    - An average score from the study section and the professor's score

**Additional recommended coursework**:  By separating the assignments into categories based on an expectation for turning them in, my goal is to support all students, recognizing we all have different learning styles, mentor relationships, and competing demands.  Many assignments are provided to support your progress and therefore it is up to the individual student whether you will turn in all of the assignments in the category where some may be dropped.  The course reader will provide feedback on proposal drafts that are turned in.  In addition:

3) Course readings are intended to support your development as a scientist. For some class sessions, they will form the basis for class discussion.  Multiple additional resources on a variety of topics are available.
4) The mentor agreement can be a very useful way to establish a working relationship with your faculty advisor.  Not all students may feel the need to establish this relationship formally.  However, a formal agreement helps both of you remain accountable throughout the quarter.
5) Active participation in class discussions supports the learning of everyone in the class.
6) Weekly or bi-weekly mentor meetings over the quarter will help you establish a productive working relationship with your mentor.  Mentor meetings should include conceptual discussions, plus feedback on the main study objective(s), proposal title, specific aims and hypotheses, study design, analysis approach, and other details. The mentor agreement is intended to support formalizing this relationship and ensuring it is successful.  In an additional effort to ensure a strong mentoring relationship, students are encouraged to turn in the mentor's feedback on one proposal draft as part of the recommended optional assignments.

**Asynchronous option:**  While I encourage students to attend class in person as much as possible, both a Zoom link and a Zoom recording are/will be available for students who need to join remotely or asynchronously.  Recordings can be found linked from the Canvas Zoom page. **Participation in the "study section" peer review session must be synchronous.**

# Syllabus Resources and Course Norms

**Illness Protocols and Safety:**

If you feel ill or exhibit respiratory or other symptoms, you should not come to class. Seek medical attention if necessary and notify your instructor(s) as soon as possible by email.

Please check your email daily BEFORE coming to class. While there will always be a Zoom option in ENVH 583 this quarter, we will send all registered students an email if we need to conduct class remotely because the instructor or a guest speaker is unable to attend in person.

Additional recommendations include:
1. Get boosted with the updated COVID-19 vaccines. These vaccines are available at clinics and pharmacies, as well as through UW Medicine and local health agencies.
2. Get your annual flu shot.
3. Wear a high-quality mask in indoor public spaces and while traveling. Masks are strongly recommended the first two weeks of spring quarter. High-quality masks help protect against a range of respiratory viruses, and are available for free in locations on each UW campus.
4. Take a coronavirus test if you have symptoms or have been exposed. Rapid antigen tests are widely available for free at on-campus locations linked here. The Husky Coronavirus Testing voluntary research study is also available for UW students.
5. Activate WA Notify on your phone to receive exposure notifications and so that you can anonymously let others know of their exposure if you test positive.

**Inclusion and Diversity:**  Diverse backgrounds, embodiments and experiences are essential to the critical thinking endeavor at the heart of University education. In SPH, we 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.


**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.

**Learning Environment and Classroom Climate:**  Your success in learning is important to me.  In addition to providing materials and assignments to support your success, I will do my best to provide a welcoming and supportive classroom environment.

We have the privilege of learning together and we have a responsibility to engage in dialogue in a way that supports learning for all of us. Here are some practices we as learning community members can strive to use in our learning process:

- My own viewpoint is important—share it.  It will enrich others.
- My students' and colleagues' viewpoints are important—listen to them.  Do not judge them.
- Extend the same listening respect to others I would wish them to extend to me.  We all have room to grow to become better listeners in non-judgmental ways.
- Recognize that I might miss things others see and see things others might 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.
- Ask questions when I don't understand something.
- Surface my feelings in such a way that we make it easier for others to surface theirs.
- Test my assumptions about how and why people say or do things.
- Challenge what was said or done, rather than make assumptions about the individual.
- Beware of either-or thinking.
- Be willing to take risks in moving outside my comfort zones.
- Affirm others.

In addition, if you have any comments or suggestions regarding the classroom climate, please get in touch with me using the mechanisms described in the *Course Communication* section above. It is my highest priority to address your comments as satisfactorily as possible. However, if you are not satisfied with my response, you may contact the contact Trina Sterry, Manager of Student and Academic Services (tsterry@uw.edu; 206 616-4177).

**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 for immediate follow up. Bias concerns can be anonymously and confidentially reported via the online form found here: 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.

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

- 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.
- 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.

**Academic Integrity Statement:** 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 478-121). 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:** 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.

**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 this website: Religious Accommodations Policy. Accommodations must be requested within the first two weeks of this course using the Religious Accommodations Request Form.

**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.

**Communication Skills:** Communication through writing and speaking is an important and transferable skill for all career pathways. Establishing a strong foundation in communication skills will help you to be successful throughout your future training and career. If you feel that you could benefit from additional opportunities to improve your writing skills in particular, 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/2020-09/Writing-Resources-9.24.20.pdf).

**Land Acknowledgement:** *The University of Washington stands on the lands of the Coast Salish Peoples, whose ancestors resided here since time immemorial. Many Indigenous peoples thrive in this place—alive and strong.*

# Course Schedule

See the next page for a 1-page schedule

# ENVH 583 CLASS SCHEDULE 2023 (Subject to change)

| Date | Topic | Resources | Tasks to complete this week (see Canvas) |
|---|---|---|---|
| Week 1: March 31 | – Course requirements<br>– Class structure<br>– Proposal elements | Syllabus, proposal format guide; Specific aims info | • Meet with your mentor & draft mentor agreement<br>• Review literature<br>• Draft proposal title and preliminary specific aims |
| Week 2: April 6 | – Review of specific aims<br>– Critiquing proposals<br>– Analysis planning | Critiquing & Analysis plan resources; Sample proposals | • Update draft specific aims and proposal title page<br>• Meet with mentor and review proposal title, specific aims and hypotheses, study design, etc.<br>• Prepare to discuss the sample grant proposal and its critiques; look over student sample proposals |
| Week 3: April 13 | – Reading the literature<br>– Review library resources | Materials posted on class website; class library link | • Conduct literature review<br>• Turn in updated specific aims for Canvas peer review |
| Week 4: April 20 | – Analysis planning<br>– Peer feedback on specific aims<br>– Peer discussions | Materials posted on class website | • Write a first proposal draft with updated aims (Note: abstract may be omitted until later in the quarter)<br>• Do a Canvas peer review of your assigned specific aims pages; be ready to discuss your feedback in class<br>• Review ENVH 583 analysis questionnaire and think about your questions |
| Week 5: April 27 | – Research requirements: human & animal subjects, Belmont Report, UW rules for student research<br>– Critique of example thesis proposals | Ethics-related materials & Sample thesis proposals posted on class website | • Read the Belmont Report and Resnik's article: What is ethics and on why is it important?<br>• Work on the ENVH583 analysis questionnaire; share this with your mentor and get feedback<br>• Turn in proposal critiques & discuss in class<br>• Add sections to your proposal draft & update text |
| Week 6: May 4 | – Ethics, scientific misconduct and plagiarism | Ethics-related materials posted on class website | • Complete the ethics-related assignment<br>• Strive for completing a first full proposal draft w/ abstract and updated aims |
| Week 7: May 11 | – Proposal problem-solving and analysis planning discussion with guest | Materials posted on class website | • Request mentor comments on proposal draft<br>• Update your ENVH583 analysis questionnaire<br>• Bring your analysis planning questions to class |
| Week 8: May 18 | – Making effective presentations<br>– Poster design | Thesis defense presentations; poster design resources on class website | • Turn in an updated proposal draft for Canvas peer review (MS word format preferred; no comments on this version) + separate comments from your mentor<br>• Attend research presentations by your peers and think about effective presentation strategies |
| Week 9: May 25 | – Peer editing and small group discussion | Peer proposals | • Turn in your peer editing assignment and be ready to discuss your observations in class<br>• Plan to discuss any outstanding questions about your research proposal in class |
| Week 10: June 1 | – Wrap-up & revisit the peer review process<br>-- Other topics TBD<br>– Course evaluation | Peer review materials are on class website | • Turn in a complete proposal (final version in PDF format; no comments or tracked changes)<br>• Plan to discuss any outstanding questions about the peer review process in class |
| Finals Week (times TBD) | – Study section scientific peer review | In-depth review of your two assigned proposals plus some review of the remaining proposals in your section | • Prepare written critiques for your two assigned proposals; Assign preliminary scores<br>• Attend study section meeting synchronously, participate in the discussion, score all proposals (bring a laptop to your study section meeting)<br>• Turn in your scores immediately and critiques within 24 hours of your study section meeting |