Environmental Health Reading: Research Proposal Preparation
ENVH 583 Spring 2016
Thursdays 1:30 - 2:20, Room T663

Course Instructor:
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Office Hours: Drop in or by appointment.

Course Goals: The primary goal of this 1-credit class is to help students develop research skills through its focus on writing and critiquing research proposals. This course is open to 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. One credit for ENVH 583 is insufficient to support the work needed to develop a good quality proposal.

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 will be requirements 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, each student will be required to read assigned materials, hand in reflections about readings, give status updates, conduct peer reviews, make presentations, and participate actively in class discussions. The final project for the course will be a peer review "study section" modeled after the NIH peer review process.

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
- Demonstrate writing skills by writing, a clear, concise research proposal with scientifically defensible aims, methods and conclusions
- 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

Class Website: https://canvas.uw.edu/courses/1040386

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 478-120). 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: 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 or disability.uw.edu. 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.

Multi-cultural Inclusion Commitment: 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. As your instructor, I encourage students with concerns about classroom climate to talk to me if you have any concerns. You may also choose to seek out others such as your advisor, a member of your Department's or the SPH Diversity Committee and/or a program director.

Requirements: The requirements for receiving credit for ENVH 583 are listed below. Each of these requirements will be evaluated to determine whether credit will be given for the course. In addition, during this quarter students are required to sign up for 2 credits of ENVH 700 (or 600) with a faculty advisor who will actively support the proposal development process. Some of the assignments require mentor feedback and the 600- or 700-level credits provide the mechanism for ensuring that feedback will occur.

1) **Complete all class readings, hand in all assignments, and actively participate in class discussions**. Readings are intended to support your development as a scientist. Often they will form the basis for class discussion. Most written assignments are (intermediate) drafts of the research proposal. **Students are required to turn in assignments with "hard" deadlines on time** (see boldface text on class schedule). For "soft" deadlines due dates are intended to support your work throughout the quarter.

2) **Meet with research mentor multiple times over the quarter and solicit their feedback on your work.** 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. Students are required to turn in the mentor's feedback on one proposal draft as part of the required coursework.

3) **Hand in a complete research proposal**. See the proposal format guide for details. Deadlines to turn in proposal drafts during the quarter are intended to support student progress.

4) **Participate in the "Study Section" review of other student proposals**. The class will be divided into two peer review groups or "study sections". Each group will review the proposals from all students in the other 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 and the professor
    - An average score from the study section

Readings:
- Required readings are posted on the class website (see modules):
    https://canvas.uw.edu/courses/1040386
- No required textbook
- Multiple additional resources on a variety of topics are posted on the class website.

Grading: To get credit in this course, the student will submit a complete research proposal and complete all other class assignments including: provide the class with progress updates, participate in peer editing, write critiques for two research proposals written by peers, participate in the study section and score all proposals, actively participate in class discussions, and hand in additional written assignments.

ENVH 583 CLASS SCHEDULE 2016 (Subject to change)

Date	Topic	Readings	Assignments (Turn in online before class unless a different date has been specified)
Week 1: Mar 31	– Course requirements – Class structure – Proposal elements	Syllabus	• Meet with mentor • Draft proposal title and specific aims
Week 2: April 7	– Reading the literature – Review of specific aims – Brief student presentations of research concept	Materials posted on class website	• Meet with mentor and review proposal title, specific aims and hypotheses, study design, etc. • **By April 5**, turn in 1 power point slide with proposal title, mentor, overall goal (see template) • **By April 5**, respond to scheduling poll
Week 3: April 14	– Literature searches; citation management	None; see library website link for our class	• **Bring a laptop** to class to support your learning experience • **Turn in** draft specific aims and proposal title page
Week 4: April 21	– Research requirements: human & animal subjects, Belmont Report, UW rules for student research	Ethics-related materials posted on class website	• **Turn in** a partial proposal draft (Note: abstract may be omitted until week 6)
Week 5: April 28	– Critiquing proposals – Analysis planning	Materials posted on class website	• Fill out the ENVH583 analysis questionnaire for your reesarch project (<u>to turn in by week 7</u>); share this with your mentor and get feedback • Be prepared to discuss the sample grant proposal and its critiques
Week 6: May 5	– Progress updates by students – Critique of example thesis proposals	Sample thesis proposals posted on class website	• **Turn in** a complete proposal first draft with abstract (MS word format preferred) • **By May 3, turn in proposal critiques** (also bring to class for discussion) **and update slides**
Week 7: May 12	– Making effective presentations – Poster design	None; see poster design resources on class website	• Obtain mentor comments on proposal draft • **Turn in** your ENVH583 analysis questionnaire • **Contribute to** the online discussion on responsible research conduct before May 19 (see website)
Week 8: May 17 (SRD 1:30-4:00 p.m.) and May 19 (regular class time)	– Ethics, scientific misconduct and plagiarism – Discussion of effective SRD presentations	Ethics-related materials posted on class website SRD Abstracts (see DEOHS website)	• **Turn in** an updated proposal draft (MS word format preferred; no comments on this version) • **Turn in comments from mentor**, either on the proposal draft or separately • **Attend SRD Poster Session 5/17 in SCC 316** • During SRD, identify posters using effective presentation strategies; plan to discuss these in class
Week 9: May 26	– Peer editing and discussion	Peer proposals	• **Turn in** your peer editing assignment and be ready to discuss your observations in class • Plan to discuss any outstanding questions about your research proposal in class
Week 10: June 2	– Revisit the peer review process – Course evaluation	None	• **Turn in a complete proposal** (PDF format)
Finals Week (times TBD)	– Study section peer review	In-depth review of your two assigned proposals; At least cursory review of the remaining proposals in your section	• **Prepare written critiques for your two assigned proposals; Assign preliminary scores** • **Attend** study section meeting, participate in the discussion, score all proposals (**bring a laptop** to your study section meeting) • **Turn in** your scores immediately and critiques within 24 hours of your study section meeting