

ENVR 684 Water and Health Communication

Wednesdays 2:30-5:00 pm, see accompanying schedule

Location: MC 2302

Co-Instructors

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Learning Objectives	
Content learning objectives	Skill learning objectives
<p>Familiarity with principles of scientific communication.</p> <p>Understanding how to report scientific results clearly without oversimplifying scientific issues to both scientific audiences and the public.</p> <p>Learning how to draft and edit a manuscript, along with other steps in the writing process.</p>	<p>Participants will be able to:</p> <ul style="list-style-type: none"> • Write a report of their research that is acceptable as an academic thesis (committee passes student) or article (accepted for publication in a peer-reviewed journal) • Deliver a scientific presentation suitable for a defense or for a conference presentation. • Deliver a 30 second “elevator” speech about the importance of their research. • Write three points about their research (their “message”) they would emphasize in an interview with a newspaper or television reporter.
<p>Contributes to MSEE <i>and</i> MS <i>and</i> MSPH <i>and</i> MPH <i>and</i> PhD Department competency:</p> <ul style="list-style-type: none"> • “Obtain broad exposure to contemporary issues in environmental sciences, environmental health and environmental engineering” <p>Contributes to MSEE Department competencies:</p>	<p>Contributes to MSEE <i>and</i> MS <i>and</i> PhD Department competency:</p> <ul style="list-style-type: none"> • Demonstrate written and oral communication skills related to environmental engineering.” <p>Contributes to the MSPH <i>and</i> MPH Department Competencies:</p> <ul style="list-style-type: none"> • “Analyze, interpret and explain the results of original research.” • “Demonstrate written and oral communication skills related to environmental sciences and engineering issues within a public health context.”

<ul style="list-style-type: none"> • “Evaluate problems quantitatively using measurements and models of contaminant transport or reactions in environmental media (e.g., air, soil, and water).” • “Evaluate the success of environmental engineering designs and assess the uncertainty involved.” <p>Contributes to MS Departmental competencies:</p> <ul style="list-style-type: none"> • “Analyze, interpret and explain the results of original research” • “Review and synthesize a body of research literature” <p>Contributes to the MSPH <i>and</i> MPH Department Competency:</p> <ul style="list-style-type: none"> • Explain the relationships between scientific knowledge, exposure, risk assessment, environmental management and environmental policy. 	<p>Contributes to PhD Departmental Competencies</p> <ul style="list-style-type: none"> • “Analyze, interpret and explain the results of original research” • “Review and synthesize a body of research literature” <p>Contributes to CEPH Cross-cutting competencies:</p> <ul style="list-style-type: none"> • Demonstrate effective written and oral health communication skills appropriately adapted to professional and lay audiences with varying knowledge and skills in interpreting health information. • Use information technology tools effectively in core public health functions such as retrieval of institutional and online public health data and dissemination of public health information. • Develop, implement, and/or contribute to effective public health programming and conduct research that integrates: (1) knowledge levels of health access among individuals and within communities, and (2) culturally-appropriate methods for conducting practice or research. • Review, integrate, and apply ethical and/or legal principles in both personal and professional interactions, as well as public health practice and/or research. • Apply evidence-based concepts in public health decision-making. • Consider the effect of public health decisions on social justice and equity. • Discuss social, behavioral, environmental, and biological factors that contribute to specific individual and community health outcomes.
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Attendees must have a complete data set prepared and analyzed to enroll in this course. Enrolled students may be in their last semester of a degree program as the scientific report will be due prior to the graduate school deadline for theses and dissertations. Spring course sessions sequentially address the issues and stages in preparing and presenting a high-quality thesis or dissertation (or preparing a paper for peer review journal publication), including the associated presentation and defense.

Course materials

Hofmann, Angelika H. (2010) *Scientific Writing and Communication*. Oxford University Press, New York.

Additional readings will be assigned for particular sessions and will be available on course web site.

Student Evaluation

Summary

- Written report: 50%
- Final examination (oral report and defense): 20%

- Class participation: 30% (15% presentation, 15% participation in discussion)

Undergraduate Grading Rubric

Each component of the student's grade noted above (written report, final exam, class participation) will be graded on a 100-point scale. A weighted average of scores on each component will be computed. Final grades for undergraduates will be as follows: A (93-100); A- (87-92.9); B+ (83-89.9); B (77-86.9); B- (73-82.9); C+ (69-79.9); C (65-76.9); C- (61-72.9); D+ (57-69.9); D (53-66.9), F (< 60).

Graduate Student Grading Rubric

Grades for graduate students will be assigned as follows: H (95-100); P (70-94.9); L (60-69.9); F (<60)

Explanation

Written assignments will take the form of progressive preparation of a scientific report using a format common for peer-reviewed journal articles. Each student will be expected to submit and, when assigned, to present draft sections of their report section for peer (class) comment. The final, compiled report will constitute the written assignment and will be graded accordingly by the instructors.

A final examination in the form of a final oral presentation of the research report during the scheduled final exam period also is required. Each student will be required to provide a 10- to 12-minute presentation of their project and to answer probing questions from the instructors during the final examination period. Grades will be based on both the quality of the presentation (organization, style of delivery, quality of slides) and on the student's ability to answer questions.

Class participation will be graded according to the brief presentations made by students of their own assignment sections and according to their contribution to the discussion of the presentations of assignment sections made by other students. See Annex 1 for scoring criteria.

Notes:

- Content evaluation is on the final submission, draft writing assignments are evaluated on the basis of presentation and discussion (not content).
- Honor code requirements will be strictly enforced and submission may be subject to on-line plagiarism checks.