

Course Title: Writing for WaSH Publication, ENVR 793

Instructor:

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Purpose

1. To familiarize students with the principles of writing of scientific papers, i.e. papers for publication in peer-reviewed journals.
2. To coach students to become successful authors and in developing and submitting a manuscript on their work.

Scope and General Organization

This 2 credit course provides guidance on preparation of a journal paper manuscript,. This course occurs in the fall semester and is intended for students who have a complete data set with results they wish to communicate to other scientists in the form of a scientific paper. It complements ENVR 684 which has a similar focus intended for those preparing theses or dissertations. Class will meet for eight sessions of 3 hours duration. Typically each session will begin with roundtable presentations and discussion, followed by a break, then a lecture to prepare students for their next assignment. Substantive preparation will be required by students between sessions.

The focus on water-health provides opportunity to explore inter-disciplinary issues within this field and to use water related examples to ensure familiarity with research concepts, approaches and tools.

Eligibility and Pre-requisites

Course is open to doctoral and master's degree students intending to prepare a manuscript for submission to a peer reviewed journal on an aspect of water and health. Undergraduate honors students are admissible at discretion of the instructor.

Students must have or be at an advanced stage of collecting the data that will be analyzed and reported in their manuscript.

Students should normally have taken ENVR 683(Water Health Research) or a similar course elsewhere or have similar background preparation. Students are discouraged

from taking both this course and ENVR 684 (Communicating Water-Health Research) because of similarity in some content.

Course is highly discussion driven and therefore enrollment is capped, normally at eight attendees. Priority will be given to (a) students advised by collaborating faculty; (b) students with collaborating faculty on their committee; (c) other UNC-CH students engaged in water-related research.

Curriculum

Section	Sessions	Weeks
Course introduction (3 hours)	<p>Understanding of course flow and structure, grading and deadline</p> <p>Understanding of scope and underlying theme of course.</p> <p>Understanding the structure of a scientific paper.</p> <p>Introduction to presentation and interpretation of findings</p> <p>Assignment: draft results sections</p>	1
Presenting and interpreting findings	<p>Review theme: presentation of findings</p> <p>Introduction to: writing introduction sections and describing objectives</p> <p>Assignment: draft introduction including objectives</p>	3
Introductions	<p>Review theme: introduction sections and describing objectives</p> <p>Introduction to: Selecting (a) target journal(s) and consequences for structure and writing</p> <p>Introduction to: writing methods sections</p> <p>Assignment: draft method section and identify one or a chain of target journal(s)</p>	5
Methods	<p>Review theme: Methods sections</p> <p>Introduction to: discussion sections</p> <p>Assignment: draft discussion section</p>	7

Discussions	Review theme: Discussion sections Introduction to: Conclusions Introduction to: reviewing, proofing and 'critical friends' Assignment: draft conclusion section	9
Conclusions	Review theme: Conclusions Introduction to: Acting as a peer reviewer Assignment: prepare AND SUBMIT peer reviews on full draft manuscripts of two participating students (note all participating students MUST submit compiled draft manuscripts for peer review within 2 days of this session)	11
The journal paper submission process; peer review	Review theme: Dealing with reviewer comments Introduction to: submission process and requirements (covering letters, proposing reviewers etc) Assignment: prepare submittal materials in line with target journal requirements	13
Final exam	Presentation of paper as a conference oral presentation	16

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: 60% (comprises final manuscript (20%); peer review reconciliation statement (10%); peer review submissions (2 at 10% each) and submission documentation for target journal (10%))
- Final examination (oral presentation): 20%
- Class participation: 20% (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+ (83-86.9); B (77-82.9); B- (73-76.9); C+ (67-72.9); C (63-66.9); C- (57-62.9); D+ (53-56.9); D (47-52.9), F (< 40).

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 manuscript 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 and revised manuscript be graded by the instructors and contribute 20%. To final grade
- Preparation of written comments on the full draft manuscripts of two other participating students (peer review). The peer review comments will be graded by the instructors and will each contribute 10% to final grade
- Preparation of a 'peer review reconciliation statement' on the written comments received from other participating students. The statement will be graded by the instructor and contribute 10% to final grade

A final examination in the form of a final oral presentation of the research during the scheduled final exam period also is required. Each student will be required to provide a 10- to 12-minute presentation of their manuscript 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. This will contribute 20% to the final grade

Class participation will be graded according to 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 do not contribute to final grade.

- Honor code requirements will be strictly enforced and submission may be subject to on-line plagiarism checks.

Annex 1: Grading of Written Assignments

Each section of the written assignment will be scored according to the following criteria. Overall grade will be based on the aggregate of scores. Guidelines and word limits will be strictly enforced (eg for a section with a 500 word maximum then no account will be taken of any text beyond the 500th word)

Score	3	2	1
Clarity	All statements are necessary and clearly expressed (precise, not open to mis-interpretation).	Some excess material not essential or included or statements not clearly expressed.	Multiple statements not clearly expressed (remainder substantively clear).
Comprehensiveness/ completeness	Report captures the full breadth of issues as described in assignment.	Report omits minor aspects of the breadth of the issue as described in the assignment that do not impact overall understanding by reader.	Report omits aspects of breadth of issue as described in assignment that would lead some readers to misunderstand the conclusion(s).
Veracity	No detected errors or ambiguity of interpretation.	Some ambiguity of interpretation and/or errors of detail having limited impact on overall conclusion.	Few examples of substantive error or ambiguity of interpretation <i>or</i> multiple examples that collectively impact on overall conclusion.
Presentation/ Structure	Report is well-structured (logical flow and structure assists reader in navigating and understanding report).	Logic flow has minor inconsistencies and/or structure unclear (eg content does not match sub-titles).	Logic flow not readily evident <i>or</i> structure substantively unclear.
Synthesis	Report successfully conveys the complexity/scale of the issue to the reader.	Reader has an incomplete outline of the complexity or scale of the issue.	Reader may substantively misunderstand the complexity or scale of the issue.

Footnotes:

For all rows a zero score applies to non-submission or performance below that of the right hand column.

Annex 2: Grading Scheme for Student Presentations

Grades will be based on aggregate scoring for all four sub-sections of the draft proposal.

Score	3	2	1
Timekeeping (with reasonable allowance for management of interruptions)	Effectively on time eg +/- ½ minute	Slightly over or under time eg 4mins < presentation > 6mins	Substantively over or under time eg 3mins < presentation > 7mins
Slides or equivalent (includes density and relevance of information) (inadequate or omitted citations lead to a zero score)	Individual slides clearly legible. Words/figures/equivalent convey ideas clearly and support/follow spoken word.	Few slides not clearly legible or where slide material does not support spoken word.	Several slides not clearly legible and/or where slide material does not support spoken word.
Response to/management of questions and interruptions	Responds to interruptions without loss of control of presentation. Conveys the speaker as generally knowledgeable while recognizing limits of their knowledge and expertise without undermining the value of the presentation.	Listener is potentially skeptical about level of knowledge or expertise of speaker or responses perceived as not focused on question or interruptions disturb flow of presentation.	Speaker does not respond to a questions; or unfocused responses to multiple questions; or speaker conveys self as lacking basic familiarity with subject or substantively loses flow of presentation.
Flow/structure	Logical flow to presentation; component themes/messages are in balance.	Logic flow present but not self-evident to listener <i>or</i> some imbalance in attention given component themes/messages.	Logic flow not detectable and or several imbalances in attention given to component themes/messages.
Audience engagement* (eg not read out from notes or slides; makes eye contact; secures attention of audience)	Compelling: speaker able to engage most of audience in presentation and to elicit discussion; highly responsive to audience.	Convincing: speaker able to engage some of audience; moderately responsive to audience; some reading of presentation material or from notes.	Adequate: speaker able to engage few of audience or elicit few questions; audience attention wanders; significant direct reading and/or failure to make eye contact.

* Audience engagement based on performance of speaker rather than actual response of audience

Annex 3: Grading of discussion of student presentations (ie in discussion of presentations made by other students)

As an indication of how scoring will be performed in any given session, each student will be graded according to the *quality* of their contribution to discussion as follows:

- No intervention/question; or interventions that hinder overall development of discussion without benefit to understanding or clarification*: 0
- Relevant comment made that is not focused on scope of assignment, or new information provided that does not contribute to developing overall (group) understanding of assignment: 1
- Intervention/question made that contributes to enhancing overall understanding of assignment theme (includes placing theme in wider context relevant to course, succinct presentation of new relevant information): 2

*includes clarification of issues that would reasonably be expected to have been clear from core background reading or prior learning

One score will be generated per student per discussion session ie scoring is driven by quality, not quantity of participation in any given session