

GEO 518: Professional Seminar in Geography

Winter Term

Mondays 3:00-5:20 pm, Wilkinson 231

Professors and Office Hours:

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TR 12:45-1:45 or by appt.

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TR 10:00-11:00AM or by appt.

Course URL: <http://dusk.geo.orst.edu/prosem/>

Course Description:

The focus of this class is on the professional development of graduate students geography, and thus will emphasize three objectives: (1) reaching an improved understanding of geography as a discipline and, in particular, the specialty areas of the OSU Geography Program (resource geography, physical geography, geographic information science); (2) developing graduate research projects from general interest areas to a research proposal including a literature review, research questions and hypotheses, methods, and a timeline and budget; and (3) developing and improving well-rounded scientific communications skills, including written, oral (formal and informal), and visual. Much of the work during the term will focus on developing your thesis proposal, and we will use that as the context for you to present your work in each of these communication formats.

Effective communication is learned through practice and feedback. Therefore, most of the course will be in the format of a graduate seminar. We will have some formal lecture time but the emphasis will be on interaction, discussion, and presentation.

Learning Outcomes: Students completing GEO 518 will be able to:	Assessment Methods
(1) Formulate a testable and tractable research hypothesis related to their proposed research topic	Writing assignments and in-class discussion
(2) Assemble and evaluate a feasible thesis project	Classroom discussion
(3) Compose a well-written draft of their thesis proposal	Writing assignments
(4) Evaluate scientific writing, including editing and critiquing other students' work	Writing assignments and in-class work
(5) Present a prepared scientific talk	Class presentation
(6) Help lead a panel discussion and actively participate in classroom discussions	Class presentation and participation
(7) Introduce a speaker	In-class work
(8) Critique a scientific poster	Assignment

Required Text:

Davis, M., 1997. *Scientific Papers and Presentations*, San Diego, CA, Academic Press, 296 pp. (Available at the OSU Bookstore)

Required Article:

Lowenthal, D., 2005. Fruitful liaison or folie à deux? The AAG and the AGS, *The Professional Geographer*, 57(3): 468-473. (Available from the class web site)

Electronic versions of the following reference materials are available either online or through the class web site:

Gopen, G. D. and J. A. Swan, The science of scientific writing, *American Scientist*, 78, 550-558, 1990. Also available online at <http://www.americanscientist.org/template/AssetDetail/assetid/23947?fulltext=true&print=yes>. Accessed 12/21/05.

Purrington, Collin, *Advice on Designing Scientific Posters*,

<http://www.swarthmore.edu/NatSci/cpurrin1/posteradvice.htm>, 2004. Accessed 12/21/05.

American Geophysical Union. Guidelines for oral presentations.

http://www.agu.org/meetings/fm05/?pageRequest=oral_guide. Accessed 12/21/05. Also see

<http://www.projectionnet.com/styleguide/PresentationStyleGuide.aspx>. Accessed 12/21/05. Lastly, for a humorous look at giving a bad talk, see

http://carbon.hampshire.edu/~cjarvis/NS121/help_121_talkhelp.html. Accessed 12/21/05.

Schoeberl, M., and B. Toon, *Ten Secrets for Giving a Good Scientific Talk*,

http://www.cgd.ucar.edu/cms/agu/scientific_talk.html. Accessed 12/21/05.

Toastmasters. A good organization to help you learn how to speak in public. There are several local clubs.

<http://www.toastmasters.org/>. Accessed 12/21/05.

Additional required readings will be assigned by the student-led panels (see below) and made available electronically via the class web site.

Not required but a useful text:

Tufte, E. R., *The Visual Display of Quantitative Information*, 2nd ed., Graphics Press, 197p. 2001.

QA276.3 .T83 2001

Course Grades:

20% Attendance & participation, as well as short in-class and take-home assignments.

20% Homework assignments.

20% Student-led presentations-discussions of their specialty areas.

40% Research proposal including: (1) outline (with some detail); (2) written proposal; (3) presentation of proposal; and, (4) appendix of an annotated bibliography of 10 scientific articles.

Schedule

Week	Date	Topic	Assignment Due	Reading
1	January 9	Introductions, Honing in on a research topic, Starting the literature review	In class: list of keywords	Davis, Chapters 1, 2, and 4; Lowenthal, 2005
2	January 16	MLK Holiday – no class		
3	January 23	Developing a research hypothesis, Writing a proposal outline.	In class: write your research hypothesis and brief explanation; Critique and revise in class.	Gopen & Swan, 1990
4	January 30	Components of a complete proposal, The annotated bibliography, Guest presentation by OSU librarians, Scott Walker and Janet Webster.	Proposal outline	Davis, Chapters 4, 5 and 6
5	February 6	The scientific abstract, Student-led panel discussion #1: Physical Geography	1 st panel discussion, Revised outline	2 student-selected papers for panel discussion #1, Twiss (handout), Davis, Chapter 18
6	February 13	Technical figures, Effective visual communication, Student-led panel discussion #2: Resource Geography	2 nd panel discussion, Annotated bibliography,	2 student-selected papers for panel discussion #2
7	February 20	Elements of successful oral and poster presentations Student-led panel discussion #3: Geographic Information Science / Geospatial Technologies	3 rd panel discussion, Proposal draft	2 student-selected papers for panel discussion #3, Davis, Chapters 15, 16 and 17
8	February 27	Poster Session	Student reviews of proposals	
9	March 6	Publication, Student presentations	Poster critique	Davis, Chapter 7
10	March 13	Ethics in science, Student presentations	Final proposal	Davis, Chapter 12

Description of Each Assignment:

1. List of keywords (due January 9): This is an in-class assignment that is due at the end of the class. You will create a list of keywords that precisely and concisely convey your research interests. This is the first step in identifying a research topic. You will use this list of keywords to help you start your literature review and hone in on a research problem.
2. Research hypothesis and explanation (due January 23): This is an in-class assignment that is due at the end of the class. You will develop a testable and tractable research hypothesis and also provide a 2-3-paragraph explanation of the topic, a brief description of its scientific and societal importance, and a description of the technical and financial feasibility. You won't have any in-class resources other than your imagination, creativity, and common sense, so it would be helpful to do some preparatory thinking and exploratory research in advance. You will then break into working groups and critique each other's work.
3. Proposal outline (due January 30, revised version due February 6): An outline, comprising all the elements of a research proposal, with some detail to be turned in to your working group (from last week). Each member of the working group will provide comments on one proposal, give the original back to the student, and turn in one copy to the instructors. Each student then incorporates the suggested revisions and turns in the revised outline in the next class.
4. Student-led panel discussions (see schedule for due dates): There will be three panel discussions during the term, one on each of the three Geography Program major areas: Physical Geography, Resource Geography, and Geographic Information Science. Students need to first decide which major area best represents their interests and form a group with the other students in this interest group. Each group will select a series of three papers to read and discuss. The articles will need to be read by the entire class and the members of the panel will lead the discussion. The panel should provide a 5-10 minute summary of each paper and each member of the panel should have a minimum of two questions to pose to the rest of the class. The goal of this assignment is to critically think about such things as: past and present areas of inquiry within your sub-field of geography; how your work fits into the discipline of geography; "cutting edge" work in your specialty area; etc.
5. Annotated bibliography (due February 13): Develop an annotated bibliography for your research topic. You will need to annotate a minimum of 10 references. Annotations should include your own 2-sentence summary of the work (not extracted from the abstract!), a brief description of the strengths and weaknesses of the work, the relevance to your research topic, other comments. Each annotation should be 1-2 paragraphs in length.
6. Proposal draft (due February 20): A draft version of your research proposal, suitable for reading by one of your student colleagues. It should contain all the elements of a complete proposal.
7. Review of a colleague's proposal (due February 27): Write up a 1-page (250 word) review of a student colleague's research proposal. The proposals will be given to you the week before. Please include a very brief summary of the proposal (2-3 sentences), comments on the "big picture", ideas for reformatting or rewriting sections (if needed), and any other constructive ideas for improvement that you may have. Please make one photocopy of your colleague's marked-up draft. Give the original to your colleague turn in the copy and one-page write-up to Anne and Dawn.
8. Poster critique (due March 6): Write up a 2-page (250 word) review of a poster presentation using the template provided in class.
9. Oral presentation of proposal (due either March 6 or March 13): Create and deliver a 12-minute oral presentation using PowerPoint (or some equivalent software). The presentation should follow the AGU guidelines. You will have a maximum time of 15 minutes, so please make sure you stick to the 12-minute limit in order to have time for questions. If you go over your time allotment, your grade on this assignment will suffer. Each student will be asked to prepare a 30-second introduction for the speaker that follows him or her.
10. Final version of proposal (due March 13): Incorporate suggestions from your peers and the instructors to revise your proposal, and turn in the final draft.