# GEOL 420/520: Geo-communication
## Information Sheet and Syllabus Fall 2014

**Instructor**: Dave Sutherland, dsuth@uoregon.edu, 204 Volcanology
**Office Hours**: Wednesdays, 10:00 AM-12:00 PM or by appointment or after class

**Lecture**: Monday and Wednesday from 2:00-3:20 PM in room 202 Cascade (crn 16076/16077)

**Overview:** Does data make a sound if it's found in the forest? Does anyone care about your senior research project or your dissertation? Well, they should, and I do. All science has to be communicated; otherwise it is lost in the vacuum. The trick is in communicating effectively and accurately. This class is intended to make you a better science communicator, which generally takes the form of writing, speaking, and making graphics to explain your ideas. However, the first step is to become a good reader. And, in the coming decade, new media will alter the way we communicate our science. This class will attempt to open your eyes to all these facets of science communication. We will practice writing and reading and making good figures, as well as discussing peer review, proposals, posters, and any other mysteries of the scientific communication world deemed interesting.

The class will only work with your participation. I will teach it as a graduate class, where the expectation is you put effort in and you will get a good grade. There will be no final exam, or exams at all. All class grades will be based on **participation (30%), weekly assignments (30%), and final projects (40%)**. We will discuss the final project in class extensively, and many of the assignments are designed to help you progress towards a creative, effective, and complete final project. Participation includes weekly peer review exercises done in class and discussion of the previous week's DOGS seminar speaker.

### Course Goals
- Improve writing ability and understand the basic structure of a scientific article
- Identify effective scientific communication principles
- Improve reading ability of scientific articles
- Practice public presentation skills and constructive review of your peers presentation skills
- Explore one geological/scientific topic in detail and create a poster/oral presentation explaining your research on the topic

### Textbooks (optional):
Montgomery S.L. (2003) *The Chicago Guide to Communicating Science.* U Chicago Press, 228 pp. **[CS]**
Brown T.L. (2008) *Making Truth: Metaphor in Science.* University of Illinois Press, 215 pp. **[MS]**

*Other useful sources:*
Bates RL, Adkins-Heljeson MD, Buchanan RC (1995) Geowriting: A guide to writing, editing and printing in Earth Sciences. Amer. Geological Institute, Alexandria, VA, 138 pp.
Davis, M. (1997) Scientific Papers and Presentations. Academic Press, San Diego, 296 pp.
Katz MJ (1985) Elements of the Scientific Paper. Yale University Press, New Haven, 130 pp.
Pechenik, J.A. (2013). A short guide to writing about biology. Pearson. 8th ed. 276 pp.
Schimel, J. (2012). Writing Science: How to get cited and get funded. Oxford Univ. Press. 221 pp.

Additional reading that includes scientific articles and chapters from relevant books will be provided as needed to students and placed on Blackboard.

### Important Dates *(***subject to change, listen for class announcements!***)*
- No class: Wednesday, November 26 (week 9, before Thanksgiving)
- In-class Presentations: week 10 (December 1 and December 3)
- Written final project due: Wednesday, December 10 (Finals week)

## WEEKLY PLAN *(***subject to change***)*

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**WEEK 1** — **Communicating Science - an overview** — **CS Ch. 1; MS Ch. 1**
Sept. 29/Oct. 1 — *Practice with grammar; models and style; reading (in class)*
*Assignment:* *Personal statement*

**WEEK 2** — **Scientific Communication** — **CS Ch. 2&3; MS Ch. 2**
Oct. 6/Oct. 8 — *Historical perspectives and current styles (in class)*
*Assignments:* *- Personal statement (peer review M, due W)*
*- Title/Abstract practice*

**WEEK 3** — **Metaphors in Science** — **MS Ch. 3&4**
Oct. 13/Oct. 15 — *Identifying metaphors; reaching the public (in class)*
*Assignments:* *- Title/Abstract (peer review M, due W)*
*- Concept/News&Views practice*

**WEEK 4** — **Writing Well** — **CS Ch. 4, 6**
Oct. 20/Oct. 22 — *GSA; defining a subfield; Library practice*
*Assignments:* *- Concept/News&Views (in library on M, due W)*
*- Introduction draft*

**WEEK 5** — **Scientific Papers and Proposals** — **CS Ch. 7&11**
Oct. 27/Oct. 29 — *Organizing and writing background material (in class)*
*Assignments:* *- Introduction (peer review M, due W)*
*- Background/Annotated Biblio draft*

**WEEK 6** — **Graphics and Their Place** — **CS Ch. 9**
Nov. 3/Nov. 5 — *Explaining your methods and trying your hand with graphics (in class)*
*Assignments:* *- Background/Annotated Biblio (peer review M, due W)*
*- Figures practice*

**WEEK 7** — **Writing Very Well** — **CS Ch. 5; MS Ch. 10**
Nov. 10/Nov. 12 — *Thinking bigger - developing a context for your work (in class)*
*Assignments:* *- Figures (peer review M, due W)*
*- Results/Methods practice*

**WEEK 8** — **Writing proposals** — **CS Ch. 11**
Nov. 17/Nov. 19 — *Engaging others in your work (in class)*
*Assignments:* *- Results/Methods (peer review M, due W)*
*- Putting it all together*

**WEEK 9** — **Oral and poster presentations** — **CS Ch. 13**
Nov. 24/Nov. 26 — *The dos and don'ts of presentations (in class)* — *NO CLASS WED. NOV 26*
*Assignments:* *- Putting it all together (peer review M)*
*- Final project abstracts; proposal summaries*

**WEEK 10** — **YOUR TURN!!!** — **PRESENTATIONS**
Dec. 1/Dec. 3
*Assignments:* *- Abstracts (due M)*

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**NO FINAL. Final written projects due Wed., Dec. 10 (Finals week).**