Scientific Communication, RSM 5XX
Spring 2011

Instructors:
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Class Hours:
Tuesday and Thursday – Lecture – 3 credits; times - TBD
Friday – Discussion – 0 credits; times - TBD

Course Description:
This course is meant to help students hone in on their ability to communicate science to audiences of all backgrounds, including research scientists, policymakers, journalists, investors, and the general public. Coursework and exercises are predicated on the notion that writing underlies all types of communication, whether in online forums, in public presentations, or in proposals or formal reports. Students will be conducting a series of written, spoken, and multimedia assignments that ask them to describe, explain, evaluate, and contextualize scientific concepts.

This course should help students:

- Write with greater force, conciseness, and clarity
- Revise and edit their own work more effectively
- Better understand how science is communicated
- More effectively follow and evaluate current research
- Present scientific information in several formats, including visually and orally

Review and revision:
One of the aims of the course is to demonstrate the critical place of revision and peer review in the scientific process. Although the peer review process for scientific publications is different from what we’ll be doing in class, many of the principles are the same. Student will be doing a lot of reading, writing, and re-writing. They will receive feedback on blogs, papers, and presentations from their peers and instructors. Then, they will be asked to revise their work based on those critiques, in addition to participating in discussions with small groups and the class as a whole. A large proportion of the work in this course will be accomplished collaboratively or during class time, so it’s essential that students meet deadlines.

Required Texts:
- Group supplemental readings will be provided online via the course website.
- Individual supplemental readings will be selected by students throughout the term.
Course Modules

Weeks 1-4 Writing in the sciences

Topics covered:
- Overview of the scientific journal article
- Databases and citations
- Standards for clear scientific description and explanation

Assignments:
Students will:
1. Post 3 blogs, each summarizing a single article
2. Peer review three colleagues' blogs
3. Search for a single topic in two databases and evaluate each in terms of ease of access, information provided, and ranking tools
4. Do an oral presentation of the database evaluation
5. Provide feedback on colleagues' presentations

Readings:
Goldbert chapters 1-Scientific English, 9-Scientific Journal Articles, 3-Workplace Scientific Writing (Link for Goldbert TOC)

Weeks 5-9 Reviewing the literature

Topics covered:
- Conducting a quick and precise literature review
- Evaluating research
- Contextualizing research

Assignments:
Students will:
1. Post 2 blogs, each summarizing three articles on a related topic
2. Peer review three colleagues' blogs
3. Search for a single topic and produce a bibliography of key sources
4. Draft of a review article introduction
5. Peer review three colleagues' drafts
6. Do an oral presentation of the draft
7. Provide feedback on colleagues' presentations

Readings:
Goldbert chapter 5-Documentation of Scientific Articles
"Bibliometrics as Weapons of Mass Citation"

Weeks 10-15 Communicating effectively

Topics covered:
- Scientific uncertainty, framing, and biases
- Media coverage of science

**Assignments:**

Students will:

1. Post 2 blogs, each summarizing three articles on a related topic
2. Peer review three colleagues' blogs
3. Produce a multimedia version of their draft including visuals and possibly audio (e.g., Powerpoint, poster, Prezi, animated video, podcast)
4. Provide feedback on colleagues' multimedia piece
5. Revise draft review

**Readings:**

Goldbort chapters 7-Scientific presentations, 6-Scientific visuals
Thaler and Sunstein chapter 1
CRED, The Psychology of Media Change Communication
MacIiwain, “Calling Science to Account”
Boykoff, We Speak for the Trees: Media Reporting on the Environment”