Science Communications & Ethics
East West XXVII
Spring 2011
Friday Harbor Laboratories

Instructor: Matt Bracken
Dates: May 16-19
Time: 8:30 – 12:15 and TBA
Location: FHL Commons

Synopsis:

Over the past seven months, you have learned a great deal about how to do marine science, and you have had to communicate that knowledge and skill set to your peers and professors via papers, posters, and presentations. However, communicating the results of your work has not been a focus. Here, we'll spend a week explicitly considering the art of science communication, including how to articulate your message, effectively communicate your work to both scientists and non-scientists, and successfully compete for funding to support your future endeavors in marine biology. We will also spend time thinking about and discussing issues related to the responsible conduct of research.

Skills and Topics:

The “Message”
- Message Boxes
- The “Elevator Speech”

Communicating Science to Scientists
- Speaking
- Writing
- Grants

Communicating Science to Broader Audiences
- The Researcher in Society
- Clarity and Language

Job Interviews
- CV
- Goals
- Appearance

Ethics in Science
- Treatment of Data
- Research Misconduct
- Animal Care
- Publication Practices
- Authorship and Credit
Schedule:

Sunday, May 15:
Assignments (to be done before class on Monday) – Please bring the following to class on Monday: (1) your laptop; (2) a brief (~1/2 page) statement of your specific research interests in marine biology; (3) a hard copy of a presentation you’ve done during Three Seas (2 slides per page); and (4) an electronic copy of the same presentation. (5) Please read the article by Smith et al. (2007) on “Tips for Effective Communication in Ecology.”

Monday, May 16:
8:30 – The “Message”
10:15 – Presentation skills
Assignments – (1) Work with your peer buddy to critique each other’s presentations; (2) Bring to class on Tuesday a copy (electronic and double-spaced paper) of a favorite paper you submitted for one of your Three Seas classes; (3) Please read the article by Harley et al. (2004) called “Scientific Writing and Publishing – a Guide for Students.” (4) Please find, print, and bring to class on Tuesday an article published in the popular press that describes an issue relevant to marine species, communities, or ecosystems.

Tuesday, May 17:
8:30 – Writing papers & grant proposals
10:15 – Communicating with broader audiences
Assignments – (1) Meet with Matt to discuss your presentation; (2) Read the following sections in “On Being a Scientist: Responsible Conduct in Research”: (a) The Treatment of Data (pp. 8-11), (b) Mistakes and Negligence (pp. 12-14), (c) Research Misconduct (pp. 15-18), (d) Human Participants and Animal Subjects in Research (pp. 24-27), (e) Sharing of Research Results (pp. 29-34), and (f) Authorship and the Allocation of Credit (pp. 35-38); (3) Bring a copy (electronic and paper) of your CV to class on Wednesday.

Wednesday, May 18:
8:30 – Job interviews: tips and strategies
10:15 – Conduct in research
Assignments: (1) Practice your presentation and (2) Bring to class on Thursday a short paper that (a) discusses the media portrayal of the popular press article, (b) describes the actual science behind the article, and (c) briefly presents, in a manner appropriate to a non-scientific audience, the true story.

Thursday, May 19:
8:30 – Presentations and wrap-up.

Your grade will be based on (1) participation, (2) your revised presentation, and (3) the short paper you turn in on science in the media.