Objective: To critically examine recent research on a focused topic within aquatic chemistry and to communicate your findings in both written and oral formats.

Topic: Each student will select a topic by Thursday November 9. Topics should involve at least one of the types of reactions studied in the course (acid-base, complexation, dissolution-precipitation, oxidation-reduction, and adsorption).

Due Dates and Times:
  Topic Selection: beginning of class on Thursday November 9
  Written Report Submission: beginning of class on Tuesday December 12
  Oral Presentation: in scheduled exam period from 1:00-3:00 PM on Monday December 18.

Project Grading and Evaluation.

Written Report: 75%
  Inclusion of relevant aquatic chemistry 25%
  Quality of application of information 25%
  Clarity of presentation 15%
  Length and quality of writing 10%

Oral Briefing: 25%
  Covers key points 10%
  Clarity of presentation 10%
  Appropriate length 5%

WRITTEN REPORT:
1. Title Page. List your topic, the date, your name, and the name of the course.
2. Executive Summary. In a one page summary, communicate all of your key points to a busy reader who may only read this page of your entire report. Number this page as page 1 of your report.
   a. Review of Relevant Aquatic Chemistry
      Summarize and synthesize the results of at least three recent papers from peer-reviewed journals (Environmental Science and Technology and Geochimica et Cosmochimica Acta are good places to start). Possible items to include in this section are the species, reactions, and reaction rates associated with your topic.
   b. Application of Information
      The goal of the paper is to go beyond the scope of a literature review by applying the information gained from the review to conditions or situations not discussed in the sources cited. For example, if the topic was the removal of a specific chemical by a treatment process, then this section could include the description of a design of a system for removal of the chemical.
4. Summary and Conclusions. Briefly summarize your key findings.
5. **References.** It is imperative that all sources of information (including websites) be cited in the text and that full reference citations be provided in this section. Use the formatting guidelines (e.g., tables, figures, reference citations) for *Environmental Science and Technology* ([http://pubs.acs.org/journals/esthag/index.html](http://pubs.acs.org/journals/esthag/index.html); then follow the link for “Authors/Reviewers.”) Use these guidelines only for formatting and not for length or division into sections.

6. **Appendices.** Provide supporting information and data that may be of interest to your reader, but that do not need to part of the main body of the report. Possible items for the appendices include any calculations performed as part of the work and tables of data used in the body of the report.

**Length and Format.** Use 11 point font, double spacing, and 1” margins. The total length (including tables, figures, and the executive summary; not including the title page, references, and appendices) should be 8-12 pages. Include page numbers in your proposal. Tables and figures can be useful elements of the report.

**ORAL PRESENTATION:**

**Length and Format.** Each student will have 15 minutes for the presentation plus 5 minutes additional time for questions. Students will most likely wish to use visual aids for their presentations and may do so using either overhead transparencies or an in-class computer. Use of PowerPoint and the in-class computer is the preferred method. Students wishing to use the in-class computer should bring their presentation on transportable electronic media.