

ED5581 Graduate Fellows Seminar-Fall 2011 (1 credit)

INSTRUCTOR

Shawn Oppliger, Director of the Western UP Center for Science, Mathematics and Environmental Education

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COURSE REQUIREMENTS

Assignments: (60%) Specific requirements will be provided for each assignment. Due at beginning of the class period indicated on the assignment.

Participation in Class Discussion: (40%) Topics of classroom discussions will be based on your experiences or assigned readings from periodicals, web or your textbook. You should be ready to participate fully in these discussions.

Late assignments will be accepted but **points will be deducted for each day (weekends included) past the due date.**

B. ATTENDANCE

Attendance will count towards your overall grade. You are expected to attend all class sessions and participate in all classroom discussions. If you miss a class you are still responsible for all missed work and assignments. An absence does not provide an excuse for not turning in an assignment that is due that day. If you are absent when an assignment is due, it is your responsibility to find a way to turn in that assignment on time.

PROPOSED TOPICS

I. Discussion of case studies of exemplary inquiry based instruction

- *Teaching High School Science and Learning Science Through Inquiry*, Annenberg Media (www.learner.org)
- *Private Universe in Science* Annenberg Media (www.learner.org)
- *Inquiry and the National Science Education Standards*, National Research Council (www.nap.edu)
- *Next Generation Science Standards*, National Research Council (www.nextgenstandards.org)
- Related articles from NSTA journals

II. Community based education

- Jon Yoder's work with NorthWest Center for Sustainable Resources (www.ncsr.org)
- David Sobel's work with Place-Based Education Evaluation Collaborative (www.peecworks.org)
- Great Lakes Stewardship Initiative (www.glstewardship.org)
- Lake Superior Stewardship Initiative (www.lakesuperiorstewardship.org)

III. Communicating Scientific Research to the Larger Community.

- A. General principles of scientific communication (Meredith, D., "Explaining Research: How to Reach Key Audiences to Advance Your Work.")
- B. Press release assignment.
- C. Examples of science communication issues
 - Mooney, C. 2008. Do Scientists Understand the Public? American Academy of Arts & Sciences, pp. iv-vi, 1-14. <http://www.amacad.org/pdfs/scientistsUnderstand.pdf>
 - Ward, B. 2008. Communicating on Climate Change: An Essential Resource for Journalists, Scientists, and Educators. Metcalf Institute for Marine & Environmental Reporting, University of Rhode Island. <http://www.metcalfinstitute.org/dl/CommunicatingOnClimateChange.pdf>