



Summer 2010 Course Syllabus: Educ 5570, Sec. 241

Exemplary Models for Science Education

Professional Development for Professionals and Paraprofessionals

Instructor of Record: Bruce Munson, Ph.D., Professor in the Department of Education
Phone: 218-726-6324, E-mail: bmunson@d.umn.edu

Dates: July 6-12, 2010

Location: Lake Michigan

Program Description: The Center for Ocean Sciences Education Excellence (COSEE) Great Lakes, in partnership with the Great Lakes Sea Grant Network, and UMD in collaboration with the U.S. Environmental Protection Agency is offering a week-long education program aboard the research vessel (R/V) Lake Guardian. The week-long program will offer first-hand explorations of Lake Michigan ecology, geology, geography, weather, and biogeochemical processes, with particular emphasis on human impacts and parallels between Great Lakes and ocean systems. Participants will be involved in the collection of planktonic and benthic organisms as well as water quality data collection and analysis. In addition to shipboard and shoreline science, participants will examine curricula and resources and explore classroom activities relating to the Great Lakes and oceans. More than 30 instructional contact hours are provided through the program. Participants accepted for the workshops may register to pay for and complete two UMD collegiate graduate credits.

Dates: July 6-12, 2010

Location: Lake Michigan aboard the R/V Lake Guardian

Facilitator: Robin Goettel, Associate Director for Education with the Illinois-Indiana Sea Grant Program is the primary and on-site facilitator for this course. Robin can be contacted by email (goettel@illinois.edu) or by phone (217) 333-9448.

Registration & fees: The UMD-CE Special Registration fee for each course is \$90 *per graduate credit* plus \$5.73 per credit for a technology fee. As a two credit course, the total cost will be \$191.46. To acquire UMD graduate credit, submit the completed Registration Form with payment by or before the first day of class: **July 6**.

Learning Outcomes: Course participants will be able to:

- Interact with scientists conducting research during the cruise; collect and analyze data en route.
- Synthesize information and provide examples of how water characteristics interact with land, life, weather, and human activities.
- Infuse Great Lakes information into existing curriculum or informal education media using traditional and/or electronic means.
- Compare Great Lakes systems with ocean counterparts, with regard to issues of human impacts and natural changes over time.

Required Readings and Resources: Materials will be distributed by COSEE Great Lakes, including URL resources.

Requirements for UMD Collegiate Graduate Credit:

- Full participation and attendance in the full week of research, lectures, labs, and discussions.
- Participate in all aspects of program evaluation.

- Complete and submit a reflective journal based on class activities. The journal will include daily reflections, comments, and reactions on:
 - Interactions with the scientists and research conducted aboard the ship
 - How the course content and experiences might be applied in the participant's teaching
 - A comparison of Great Lakes and ocean systems
- Develop and submit a 1-2 page description of how you can apply your knowledge of how water characteristics interact with land, life, weather, and human activities in your teaching situation.
- Develop and submit **one** summary application paper. The paper will briefly summarize the content of one additional scientific article related to the course content and then reflect on how that content can be used in the participant's teaching. Completion of this paper requires expanding your knowledge of the course content by finding and reading scientific papers after the ship-board experience is completed. A summary application paper is typically completed in about two pages.

Completion Details:

- The reflective journal, and summary application paper must be submitted to Bruce Munson, 125 Bohannon Hall, 1207 Ordean Court, UMD, Duluth, MN 55812.
- Assignments are due no later than July 30, 2010. Grades will be submitted per UMD guidelines and available by mid-September.

To obtain grades/UMD transcript:

To view a transcript or print an unofficial version, use your UMD username and follow these steps to initiate your UMD student email account.

1. Registration for the course will result in generating a UMD username, if you don't already have one.
2. Login to UMD to determine your UMD username: <http://www.d.umn.edu>, click on "people" and type your name. Record the 8 alphanumeric username assigned by UMD.
3. Login to <http://www.d.umn.edu/itss/email>.
4. Click "initiate your account."
5. Enter your social security number, UMD ID number, and birth date, ex. 07/20/1965.
6. Type a password at least 8 digits/letters/characters, ex. Djk65\$++.
7. Click "submit form" and your account is activated.
8. Now you may view your grades and print an unofficial transcript or request an official transcript to be sent directly to your principal (\$5.00 per official transcript payable to UMD).

Print a transcript form by following this link: <http://www.d.umn.edu/registrar/transcripts.html> and select the PDF version or the online version (requires major credit card payment).

To print an unofficial transcript, login to URL: <http://www.d.umn.edu/registrar/transcripts.html>

If you need your password reset, call UMD ITSS Computing Services at 218/726-8847.

For additional assistance, please call Helen Smith Stone at 218/726-6680 or email: hsmithst@d.umn.edu. If you require special accommodations, please contact the Instructor of Record.

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