



Spring 2010 EVS 592, 3 cr.

Teaching about the Marine Environment

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Can't get to the shore to teach about the marine environment? This course, developed and taught by Dr. Rosanne Fortner, former President of the National Marine Educators Association and Director of COSEE Great Lakes, offers classroom-based methods for ocean education! Explore on-line sources and exemplary print materials for grades 5-12, many adaptable for informal learning. Match the lessons to your curriculum and adapt to your setting with expert assistance. The course is completely online and asynchronous.

Goals: This is an instructional methods course designed to assist formal and informal educators in

- 1) fostering ocean literacy [OL] among their students or informal learners,
- 2) developing awareness of how local science and issues relate to the world ocean,
- 3) identifying relationships among traditional school disciplines in the study of coasts and oceans, and
- 4) expanding the scope of marine and aquatic education to enhance the curriculum of grades 5-12 and informal learning.

The **approach** of the course in meeting these goals will be to engage participants in

- exploring resources for indoor learning about marine sciences
- adapting existing high-quality resources for new settings
- developing a collection of multimedia resources for marine education
- evaluating tools for teaching, in general and for personal needs in teaching.

For each topic in the course, background readings will be provided, and the ocean literacy principles and scope/sequence will be discussed. Participating teachers will match the activities for the topics to the NC standards in science at their grade level. An activity [often a choice of activities] will be tried with a group of learners and responses discussed online. Discussion will include advantages and disadvantages of the methodology for different instructional settings. Guidelines for curriculum development will be built as different lessons are evaluated, and the culminating project will be an electronic portfolio of materials adapted for the individual's classroom or informal setting.

"Text" materials are primarily online from Sea Grant, COSEE, NOAA and other providers, but participants will be required to purchase a copy of the Fall 2010 issue of *Science Activities* journal and ES-EAGLS *Life in the Great Lakes* [innovative methods for coastal/aquatic education].

Tentative schedule of topics

Week	OL#	Topic/Activities	Mode of learning
1-2	All	Exploring ocean literacy; curriculum matching	Readings, science standards application
3-4	1	Surface currents; marine geography, water cycle, salinity	Data interpretation [numerical, ocean observation systems]
5-6	2	Geology, erosion, sands, sea floor and biological connections	Simulations, laboratory, aerial photo interpretation, Google Ocean
7-8	3	Weather & climate connections; hurricanes; climate change	Map reading, data mashups, divergent thinking
9	4	Ocean importance to life	Cooperative learning, concept mapping
10-11	5	Biodiversity; life cycles, invasive species, environments, food webs	Board games, dry lab, music, inquiry lab, decision making
12-13	6	Ocean issues: debris, overfishing, hypoxia, whales-sonar	Role play, creative writing, multimedia resources
14	7	Ocean exploration	IOOS, Art in science
15-16		Completion of assignment portfolio	

For more information, contact Rosanne Fortner at fortnerr@uncw.edu

