Over the past 40 years, Sea Education Association has become known as an expert in the field of undergraduate oceanographic research. This year, we have once again found ourselves in the unique position to contribute to research for the larger oceanographic community while engaging undergraduates in the educational experience of a lifetime through our study abroad program, SEA Semester.

After the Deepwater Horizon oil spill in April 2010, SEA was contacted by the National Oceanic and Atmospheric Administration (NOAA) for advice on sampling and quantifying tar balls due to our long time series data base and past publications on tar distribution in the North Atlantic. The SEA faculty recognized this as an opportunity to begin work on a groundbreaking new semester program, Energy & the Ocean Environment. This SEA Semester program, which will be offered for the first time in Spring 2011, is an investigative science and policy semester focused on the social, environmental, & technological dimensions of energy production and transportation in coastal and open ocean environments.

Energy & the Ocean Environment will combine coursework in oceanography, public policy, and marine environmental history with a hands-on research and sailing experience in the Gulf of Mexico and the Atlantic. An initial shore component on our campus in Woods Hole, Massachusetts will allow students to engage in intensive coursework while seeking to address and understand the big issues associated with energy and our oceans. Students will have access to SEA faculty, distinguished guest lecturers, and the world-renowned WHOI/MBL Library. They will also have the opportunity to explore local issues related to energy and the ocean environment including the Cape Wind project and the still-present effects of regional oil spills. Researching the local effects of the 1969 Buzzards Bay oil spill in particular, facilitated by the scientists who have studied it since its occurrence, will allow students to conduct a comparative study with their findings in the Gulf.

Aboard the SSV Corwith Cramer, students will trace the footprint of the oil spill, exploring its effects on
local and regional communities, coastal and deepwater ecosystems, and ocean chemistry. A port stop in Grand Isle, Louisiana, will allow students to meet with local fishermen, visit affected marshlands, and visit with other local experts. Following the Gulf Stream north from the Gulf of Mexico to Woods Hole, scientific sampling will be interspersed with field trips to affected wetlands, industrial ports, and local communities.

Finally, a second shore component in Woods Hole at the program end will allow students to present their findings by way of a capstone conference alongside experts in the field of marine science.

Students will work individually with SEA faculty to design an original research project during the initial shore component. Students may have an opportunity to focus on:

• Indicators of oil: concentration of dissolved gases, fluorometry
• Tar balls in the Gulf: natural oil seeps vs. oil spill
• Impact on corals
• Fluff deposition on seafloor
• Nutrient concentrations
• Concentration of oil in the sediments near Deepwater Horizon

To learn more, visit the EOE webpage. Space & financial aid are available.

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