



Global Currents

Spring 2010

A Biannual Bulletin by the Center for International Education

Volume 6 Issue 2

IN THIS ISSUE:

- 2010 CIE Conference- Law and Disciplinarity:
Thinking Beyond Borders
- Christine Scott Thomson's Responsive Urbanism
- Undergrad Katie Larson Conducts Independent
Research in Jordan
- Air Pollution and Ancient Cultures in Mexico

UNIVERSITY of WISCONSIN
UWMILWAUKEE

cie
center for
international education

Air Pollution and Ancient Culture

When Professor of Atmospheric Sciences Jon Kahl and his family were planning a vacation to Latin America in 2001, they yearned for an opportunity to practice their Spanish while taking in the sights. They decided on Mexico City, the sprawling megacity and national capital of our neighbor nation to the south. As an atmospheric scientist, Kahl was interested to visit the air pollution research center at the National Autonomous University of Mexico (UNAM) during their trip. Building on the foundation of his initial encounter in 2001, Jon returned to Mexico for a semester-long Fulbright at UNAM in 2003 to conduct extensive research in the area. The relationships that he established during those trips have endured, leading recently to an innovative UWinterIM study abroad program at UWM.

Professor Kahl's study abroad course examines the relationships between meteorology, air pollution, and cultural artifacts. Limestone structure from the pre-Hispanic and colonial eras are particularly vulnerable to acid rain. While the rate of erosion is relatively small, many of the richest architectural features are relief sculptures and paintings, both of which are at risk of significant acid rain erosion. Moving between various archaeological sites and modern research centers, students gain a comprehensive understanding of the problem and apply their learning to potential responses and solutions.

The course emphasizes student research, and several participants received funding through Office of Undergraduate Research (OUR) grants. Students participate in a pre-travel lab training to prepare them for data collection on site. At various locations in Mexico – Mexico City,



Prof. Kahl and University of Campeche student Michelle Candiani Gomez at Kabah

Papantla, Veracruz, and Campeche – students collect rain samples to determine levels of acidity and the corresponding threat to ancient architecture. Upon return, they conduct a meteorological analysis of their samples to identify the probable upwind emissions sources that polluted the rain.

Professor's Kahl's Air Pollution and Ancient Cultures program is a model for interdisciplinary, engaged learning at UWM. The course brings together diverse fields, such as art history and atmospheric sciences, into a coherent program with real world applications. Moreover, the program illustrates how international education is a rich and valued component of every academic field.



Collecting precipitation samples in Veracruz



Inspecting acid rain monitoring equipment at El Tajín

Kahl and students at the University of Campeche's Corrosion Research Center



Kahl and study-abroad students at El Tajín



UWM study-abroad students climbing a Mayan pyramid at Calamul



Demonstration of historical cannon preservation at the University of Campeche