

Student Research on Display

“Each one see one, do one, teach one.” This medical school saying gets at the heart of true active learning. Not just absorbing information but turning it into a product for others’ education is what makes ideas stick.

In the Program in the Environment, faculty use this learning method in many



Joshua Booker presents his senior honors thesis research to an audience of faculty, family and classmates in April, 2007.

courses. The result is an impressive array of “deliverables:” posters, presentations and theses that represent students’ deep understanding and integration of new ideas.

Among the PitE courses requiring public

presentation of a final product in Winter 2007 were Environ 303: GIS Explorations, Environ 306: Global Water, and Environ 499: Senior Honors Thesis.

GIS Explorations

GIS (Geographic Information Systems), “includes computer hardware and software that allows one to map and analyze spatially overlapping data sets” says Professor Jim Breck, who teaches the GIS Explorations course. His students had to choose a topic to study using GIS. The result was topics as varied as “Likely

path of aqueduct to Aphrodisias, Turkey,” “Michigan Geology: Predicting the Presence and Alkalinity of Inland Lakes,” and “Green Roof Potential.”

Students’ work culminated in the preparation and presentation of a Power Point slideshow. These presentations highlighted not only the maps students created, but their analysis of them and the conclusions they reached. Rachel Ford, a student in the class, said learning to use the GIS software (ArcGIS) was tedious, but applying it was fun. “This was the most useful class I have taken,” she said.

Global Water

In Professor Tom Princen’s Global Water class, students made poster presentations on a water controversy of their choosing. Elle Beard and Michael Konietscka investigated the Rio Grande’s reduced flow in their poster, “A River with 2 Sides.” Julia Dodd and Carly Jankens presented a poster on “The Waiahole Ditch, Hawaii” and the future of this abandoned irrigation stream.

Princen says the poster’s limited space forces students to narrow in on a few key issues. Each poster had to describe the water resource, its size, surrounding climate and ecology. It had to outline the conflict including what parties are affected/interested. Finally, it had to propose solutions to the conflict.

Students presented their posters in an open session in the Dana Building Commons. Princen says the public presentation gives students a chance to be

see **Student Research**, p. 4



Director's Letter: Growth and Change

Growth continues in the Program in the Environment. We are getting larger and gaining stature at the university. In fact, our concentrators and minors were just a few students shy of 300 by the end of Winter 2007 semester. This growth put a strain on the administrative office space we had occupied for five years in the already crowded Dana Building.

By the time this issue reaches you, the Program in the Environment will have relocated its administrative offices to the new Undergraduate Science Building (USB). This move was actually slated to occur two years ago. It was part of the Provost office's plan to put several interdisciplinary undergraduate science units in the new building. That plan was put on hold when the Frieze Building was torn down and the USB was used to house the displaced Linguistics department.

This past summer, Linguistics moved out. The Undergraduate Research Opportunities Program (UROP) and Women in Science and Engineering (WISE), both part of the Provost's original plan, moved in. PitE's move fills the first floor suite of undergraduate science offices.

Amenities of the new building include access to specially designed "dinner theater" classrooms. These allow students to work in small groups, using technology at their tables, as well as share information across the class through whiteboards and projection screens around the room's perimeter. PitE is also providing space for PitE Student Government and other campus undergraduate environmental groups in the USB. We want this space to be the hub for undergrad environmental activity.

I wish to underscore the outstanding efforts of our staff amid all this change. They work to keep students at the fore of our work. I was pleased to see these efforts rewarded with the LSA Student Government's Department of Excellence Award for 2006-2007 (article, p. 6).

I hope you will come see us in our new space. I look forward to bringing you more updates in 2008.

Respectfully,



Note our new address:

Program in the Environment
1120 USB
204 Washtenaw Ave.
Ann Arbor, MI 48109-2215

NSF Fellowship helps Mussoline with whale research

Studying marine ecology at a land-locked institution like the University of Michigan presents many challenges. PitE senior Sarah Mussoline has taken advantage of off-campus opportunities to round out her education in this field.

This past summer Sarah, a native of New Jersey, spent ten weeks at the eminent Woods Hole research institution in Massachusetts. She aided resident scientists and conducted her own research on right whales at the Northeast Fisheries Science Center.

Her summer research as well as some of her U-M tuition has been covered by the NOAA Ernest F. Hollings Undergraduate Scholarship

Program. Sarah was selected as a recipient in 2006. The Scholarship pays an annual

stipend for 1-2 years and funds a summer of research at any NOAA facility.

As a Hollings Scholar, Sarah participated in a month-long research cruise in the Great South Channel off the Maine coast. She helped deploy and retrieve automated recording units.

Once the units were retrieved, Sarah analyzed right whale calls on the instruments. Sarah explains the significance of the research: "The right whale is the most endangered species of whale. Ultimately we are trying to identify corridors where vessels and right whales are likely to interact and minimize this contact."

Sarah is using her data from the summer for her Senior Honors Thesis (see "Student Research on Display," p. 1 for more on the Honors Thesis program).

Sarah plans on becoming a Peace Corps volunteer after graduation. After that she expects to be back in the marine biology realm as a graduate student. ▪



Mussoline

Two Chosen as Nissan-WWF Leaders

PitE students Erin Allen and Christopher Detjen were notified in April that they were selected for the 2007 Nissan-World Wildlife Fund (WWF) Environmental Leadership Program.

Only sixteen students, drawn from a handful of prominent environmental programs, comprise the program's enrollment. Students are chosen based on their capacity to "become strong and effective advocates for an environmentally sustainable future." Participants receive

- a \$5,000 cash award,
- registration in the Nissan-WWF Environmental Leadership Summit held in Washington, DC and Nashville, Tennessee during June, 2007, and



Erin Allen

- an all expense-paid field expedition to Brazil for two weeks in August, 2007.

Erin Allen is a senior. She works with the student group Go Blue Discover Green to recruit volunteer student guides and education leaders in the Matthaei Botanical Gardens and Nichols Arboretum. She also devotes hours to Cultivating Community and Project Grow, both of which focus on local agriculture.



Chris Detjen

Christopher Detjen is also a senior. The PitE and Political Science major co-chairs the Michigan Student Assembly's Environmental Issues Commission (EIC). He completed his PitE Field Experience requirement as an intern with the grassroots organization "Clear the Air" in Washington, D.C. ▪

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experts on their issue.

“I am regularly surprised and pleased,” Princen says, “at the comments student presenters make: ‘I didn’t want to do this because I didn’t think I knew enough. But when I did it, I realized I knew a lot.’”

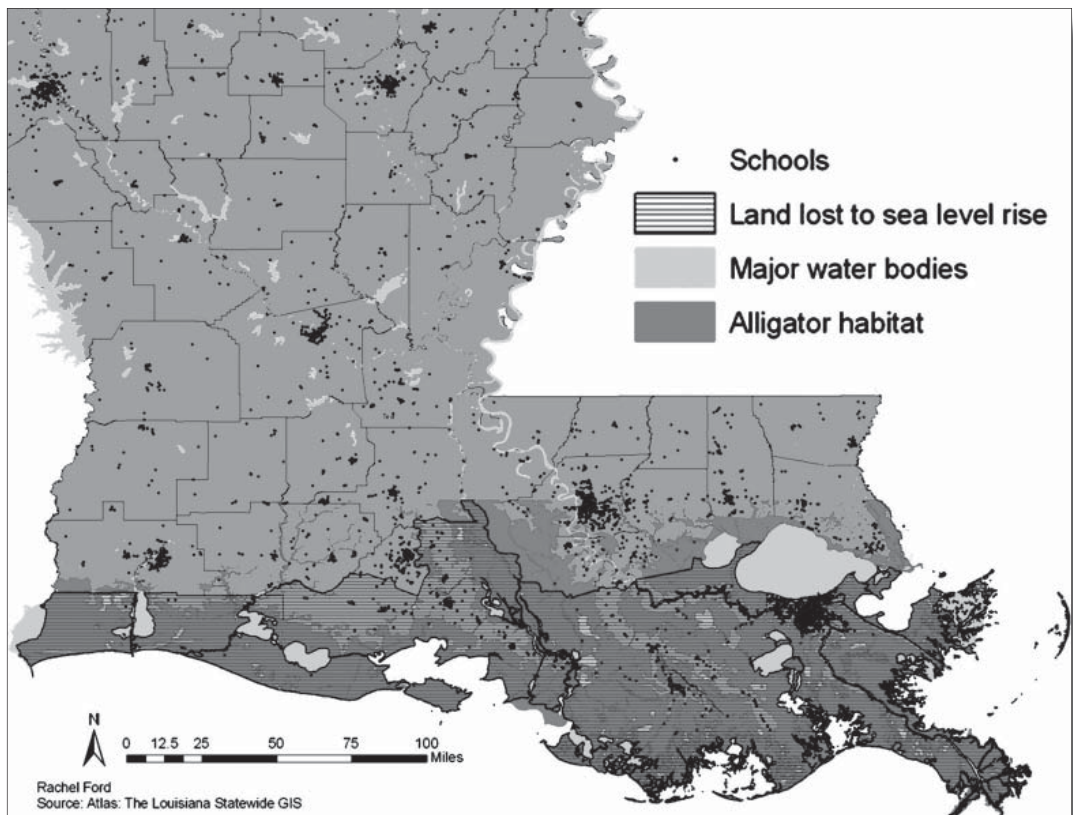
Senior Honors Thesis

Six students completed the two-year process of formulating, researching, analyzing and summarizing the results of a research question of their choosing. The final requirement for students in the Senior Honors Thesis class was to present their research to a general audience. Students’ advisors were in attendance as were other

PitE faculty, staff and students.

Following their presentations, students had to answer audience questions. Some were straightforward. Others were so complex, government agencies have not been able to answer them.

Jennifer Kullgren, whose thesis was on “Evaluating the Success of Lake Trout Refuges in the Great Lakes,” said, “After completing my senior honors thesis, presenting my work to an audience of peers and professors was both nerve-racking and rewarding.” In the end, however, she says she appreciated the chance to share what she’d learned and discuss her project’s potential implications. ▪



A slide excerpted from Rachel Ford’s GIS presentation, “Sea Level Rise in Louisiana.” It illustrates how a 1 meter rise in the ocean level would impact Louisiana’s alligator habitat. Ford chose school frequency to represent population density. As her presentation noted, “with the sea level rise, both people and alligators will be migrating, which will probably cause more contact between people and alligators- does this map imply then, that wherever people are, alligators will be killed off, or that people will choose land that is not suitable for alligators and vice versa?”

Perspectives: HIV/AIDS in South Africa

by Lys Inungu

In the summer of 2007, I got the opportunity to travel to South Africa as a recipient of Graham Environmental Sustainability Institute Field Research Grant.

Through the U-M Global Intercultural Experience for Undergraduates Program (GIEU), I traveled with seventeen University of Michigan students to learn and understand the effects of HIV/AIDS in South Africa.

Dr. Nesha Haniff, Professor of Women's Studies and the Center for African and Afro-American Studies (CAAS), taught us a module that explained HIV/AIDS. The module is spoken, and can be taught without the use of a pen or paper.

We traveled to four locations within South Africa to teach students and citizens about HIV ourselves. Our main target groups for the module were college students,

children, and caregivers. Since the module is built on the pedagogy of empowerment, it was very important for us to speak to women, so that they can be empowered in their own lives.



Lys Inungu taught HIV/AIDS awareness in South Africa this summer.

We asked students to translate the module into their native languages, so that it can be used to teach in their communities. To our amazement the module was taught in over ten languages such as Zulu (South Africa), Lingala (DR Congo), Tswana (Botswana), and Igbo (Nigeria).

With the fall of apartheid, many Black South Africans still live in townships, which were areas that were segregated racially by the former government. Just a few minutes outside the bustling city of Durban is the township of Cato Crest. Cato Crest is filled with dilapidated homes with people living in extreme poverty.

see **HIV/AIDS**, p. 6



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I got the opportunity to work with many of the children living in this community. Teaching them the module was very difficult because many of them have seen the effects of HIV/AIDS with their own eyes. Some have lost not only one but both parents to the

‘Some have lost not only one but both parents to the epidemic.’

epidemic. Through their pain, they demonstrated such joy and happiness and it gave me the greatest pleasure to work with them.

Lastly, we assisted caregivers and educators at the Red Cross Organization in Cape Town. Many of the caregivers in South Africa are older women. It was very important for us to relay this information to them because they are at the forefront of educating others about HIV/AIDS in South Africa.

In some areas of South Africa, the HIV/AIDS rate has risen above 35%. Although

the situation in Africa is very tragic, there is something amazing going on over there. That is ‘ubuntu’. Ubuntu is a South African saying that means treating people the way that you would want to be treated. This was demonstrated to me through the humble and loving South Africans who opened up their homes and hearts to us.

Desmond Tutu, a well-known South African leader, once said, “My humanity is wrapped up in your humanity.” In addition to sustaining the environment, it’s also important to sustain the human soul as well, providing love and care to everyone we meet. ▪

Lys Inungu is a junior. She is majoring in Political Science and minoring in Program in the Environment.

To read about past Graham Environmental Sustainability Institute Grant recipients, visit <http://provost.umich.edu/gesi/funding/06pite.html>.

LSA Students Pick PitE for Excellence Award

The Program in the Environment was honored in late spring by receiving the Department of Excellence Award for 2006-2007. LSA Student Government makes the award each year. It selects the recipient unit based on student survey responses. Staff accessibility, teaching quality and course variety are among the judging criteria.

“The PitE program has allowed me to find a welcoming smaller community within the larger University context,” said one student survey respondent. “The advisers are amazing,” said another.

Janet Soave, LSA Student Government’s Academic Relations Officer, informed the program of its award. She said, “It was impressive and to see such wonderful feedback on so many levels. The students in Program in the Environment had a variety of excellent compliments on topics ranging from advising to course variety, and everything in between.”

Department Administrator Beth Hill called it a “much appreciated show of support” for PitE’s student-centered atmosphere. ▪



By Angela Tapley, Concentration Advisor

I would like to give special attention to the specialization requirement in the Environment concentration. The specialization's individual focus allows you to choose three related upper division courses in one particular area with a common environmental theme. There is no wrong combination of courses for this requirement. To give some examples of interesting specializations, I am going to highlight one in each newsletter this year.

Franco Muzzio: Environmental Writing

Senior Franco Muzzio took his specialization requirement in a unique direction. He found the common environmental thread in his English and writing courses. As a result, his specialization in Environmental Writing is one of the most interesting and creative I have seen.

Muzzio has always been interested in writing and began his time at U of M in the School of Engineering. He is now an English and Environment concentrator.

PitE coordinator Alicia Farmer suggested he look into attending Camp Davis. It is there he took English 317-Literature and Culture, with Professor John Knott. After thoroughly enjoying the course, he sought council from Knott on future course suggestions. Muzzio recommends any PitE student who is having trouble

coming up with specialization courses do this with professors. Knott suggested Environ 320-Environmental Journalism, which Muzzio took and experienced as a completely different style of writing.

English 317, taken at Camp Davis, provided a very moving experience for Muzzio. In his specialization proposal he writes, "The Camp Davis class was particularly inspiring because after reading a story about the Great Plains, we'd get to go walk through them and try to feel what each writer portrayed, instead of only imagining it." He told me later that being able to experience the literature and the power of nature was a great break from the traditional classroom experience, especially sitting through English classes using imagery in the winter. At Camp Davis, he could really feel what the author was trying to convey.

Muzzio used the following courses to make up his specialization:

- English 317-History and Literature of the Rockies,
- English 317-Literature and the Environment,
- Environ 320-Environmental Journalism, and
- English 484-William Faulkner.

It was the Faulkner class and the paper he wrote for it on swamp imagery that he feels tied the combination of courses together.

This specialization is a great example of the wide variety of interests our PitE concentrators have. I would encourage all current concentrators to approach the specialization requirement the same way Franco did, by focusing on your interests, having fun and being creative with it. ▪



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The View from USB

The Program in the Environment offices have relocated from the Dana Building...



...to an expanded office suite in the Undergraduate Science Building. Read more in the Director's Letter, page 2.