

## Colleges target 'wicked' environmental problems

By MARILYN BOWDEN

Courses and curricula with environmental emphasis have been sprouting in many disciplines in local colleges and universities. Most recently, the focus is on multi-disciplinary studies.

This semester the University of Miami launched a PhD program in Environmental Science & Policy, said Gina Maranto, interim director of the UM Leonard and Jayne Abess Center for Ecosystem Science and Policy.

The multidisciplinary program allows students to tap into synergistic research networks across a range of schools and colleges, including the College of Arts & Sciences, the Rosenstiel School of Marine and Atmospheric Science, the Miller School of Medicine, the schools of law, communication, and architecture, and the College of Engineering, she said. "The approach we use is to try

and find crosscutting themes and then bring multiple methodologies to bear on them," Dr. Maranto said. "A social scientist might look at how people in small villages make decisions about water use. An engineer would look at the siting of dams, and a geographer at remote sensing data to see how the watershed is changing over time due to development."

This approach targets thorny issues environmentalists call "wicked problems," she said, "because they don't have easy answers. They're complex, time-sensitive and require the input of multiple people – local, regional and international. That's why it's critical to have this infrastructure."

The PhD program has seven entering students, she said, with varied backgrounds, from industrial engineering to marine biology to wildlife management.

"It's critical that they have both



Photo by Marlene Quaroni

Gina Maranto, left, and environmental science students Katie Crosley, Michael Parenti and Carlisa Callwood.

the ability to deal with quantitative measures and a qualitative understanding," Dr. Maranto said.

Florida International University's interdisciplinary School of the Environment and Society within the College of Arts & Sciences is about a year and a half old but will be "officially for-

malized" in January, said Director Mike Heithaus. It's administered from the Biscayne Bay campus, he said, but reaches across the entire system, embracing the Marine Science Program, the newly formed Department of Earth and Environment, and centers and institutes focused on environmental

issues, such as the Southeast Environmental Research Center. Programs as varied as creative writing, international relations and psychology participate.

"Basically, the school brings together a lot of the expertise that FIU has in environmental fields," Dr. Heithaus said, "with the philosophy that in order to solve environmental problems you have to have many different disciplines working together."

"It's not enough to know how the environment works; you also have to know how people are affected by the environment and how they affect it."

FIU has had teams of faculty working across disciplinary boundaries for some time, he said, and that has helped in establishing the School of the Environment and Society as well as in collaborations with non-governmental organizations and other universities and partners.

"We're in the process on developing new programs," Dr. Heithaus said, "and designing degrees from undergraduate to PhD levels, so that our graduates can be competitive in the new green economy."

Miami Dade College's Earth Ethics Institute has been encouraging "earth literacy" among administrators, faculty, staff and students since 1993, said Director Colleen Ahern-Hettich.

"Since that time," she said, "we have been training faculty so that they can create green modules for their specific focus."

To this end, Ms. Ahern-Hettich said, the institute offers resources, workshops and programs for the Miami Dade College community, such as the spring interdisciplinary elective called Earth Literacy and Sustainability.

The Institute also develops programs with MDC's School of Community Education, she said, that have proven very popular. At the North Campus, courses in photovoltaics, focusing on installing solar energy panels, have been expanded due to demand. More than 400 people attended a recent lecture on the subject, she said.

Since 2004, Ms. Ahern-Hettich said, the institute has partnered with Miami-Dade public school teachers and Three Sisters Organic Farm to set up organic vegetable gardens within schools.

"At first it was like pulling teeth to get teachers interested," she said. "Now we can't provide enough. This year the program was filled in the first hour."

# A healthy shade of green

A healthy community is important to us. So is a healthy environment. We're proud that our eco-friendly efforts have won a national award for Environmental Excellence from Practice Greenhealth.

Recycling is one component of Baptist Health's green philosophy. We currently recycle more than 70 tons of waste per month. And, we save more than one million kilowatt hours a year simply by powering down computer equipment when not in use.

We build green, as well. Many of our current and recent construction projects apply the latest standards for environmental responsibility.

We constantly seek out fresh green ideas. It's good for us, our community and our planet.



**Baptist Health  
South Florida**

BAPTIST HOSPITAL OF MIAMI • SOUTH MIAMI HOSPITAL • DOCTORS HOSPITAL  
BAPTIST CHILDREN'S HOSPITAL • HOMESTEAD HOSPITAL • MARINERS HOSPITAL  
BAPTIST OUTPATIENT SERVICES • BAPTIST CARDIAC & VASCULAR INSTITUTE

Committed to our faith-based charitable mission of medical excellence

baptisthealth.net