

A College Going Green

Around the CLAES

New Classes with committed faculty and students support the environment

Next fall, the College of Liberal Arts, Education, and Sciences will offer Introduction to Sustainability, a course focused on helping students gain a more involved understanding of environmental management. **Dr. Laura Hyatt** says the class will center on a close examination of Rider's carbon footprint – the aggregate impact of all campus activities on the environment.

"In an area where global education is so vital, it's equally important for us to focus locally, and then maintain that focus wherever we go," Hyatt said.

This course is just one offered for the newly approved minor in Sustainability Studies, which will be open to all students. As part of their degree, students minoring in Sustainability Studies will be required to participate in credit-bearing, hands-on projects on and off campus. They may engage in a project on-campus, participating in collection and analysis of resource use data, devising a project to inform the community about a pressing sustainability issue, or working on our community garden. Off-campus opportunities being developed include interning with Sustainable Lawrence, shadowing a LEED architect at a local firm, engaging in environmental education at local farms, developing outreach projects to help local businesses reduce their energy costs and environmental footprint, helping human-service agencies improve the dietary habits of low-income residents, or running public events that provide community members with tangible ways to become more sustainable.

As part of the new Sustainability Across the Curriculum program, faculty from across many disciplines within CLAES and the College of Business Administration will incorporate issues of sustainability into their own curricula.

For example:

- **Dr. Michael Brogan**, assistant professor in the Department of Political Science, is teaching a class this fall which incorporates the political aspects and responses to the oil spill in the Gulf of Mexico.

- **Dr. Barry Janes**, professor in the Department of Communication and Journalism, will teach a course on how climate issues and sustainability are addressed in the media.
- **Dr. Jonathan Yavelow**, professor for the Department of Biology, along with Ralph Copleman, the executive director of Sustainable Lawrence, will team-teach a Baccalaureate Honors Program course on environmental sustainability.



Beyond the Lawrenceville campus, CLAES students and faculty are making strides to improve the environment. **Dr. Jonathan Husch**, chairperson of the Department of Geological, Environmental, and Marine Sciences (GEMS), was recently selected to serve on the New Jersey Department of Environmental Protection's new Science Advisory Board. The 16-member panel, composed of scientists, educators and experts, will help advise and guide the many complex environmental issues facing the state.

Nicole Chakowski '12 and **Allison Ingram '13**, two Environmental Science majors, spent time this summer at Mount Vernon, the Virginia home of George Washington, where they assisted in a research project with **Dr. Daniel Druckenbrod**, assistant professor of Environmental Sciences. The project studies the history of the forestry on the estate. Closer to home, Chakowski also organized a cleanup at the Loveless Nature Preserve on Eggerts Crossing Road, adjacent to Rider's Lawrenceville campus.

Yuliya Labko '12, **Nina Joffe '12**, and **Charlie Zielinski '10** assisted Bina Indelicato, a Lawrence Township resident and green team member, in calculating the carbon footprint of the municipality. It is one of the first whole-town footprints to be measured in the state under the Sustainable Jersey program. Meanwhile, a group of freshmen are performing a service learning project to clear brush at the Lawrence Nature Center. ♣

- Biology major **Natalie Baggett '11** received an American Society for Microbiology Undergraduate Research Fellowship. The award comes with a generous \$4,000 stipend to support research in microbiology.

- A team of 150 students from the Department of Education raised more than \$3,300 for the annual Central New Jersey Walk Now for Autism Speaks on October 10 in West Windsor.

- **Dr. Diane Casale-Giannola** has been named the winner of the Nasim Dil Award for Distinguished Service in Teacher Education by the Small Special Education Programs Caucus, based in Bowling Green, Ky.

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From the Dean



There are few issues as pressing today as environmental sustainability. Human civilization is utterly dependent on the healthy function of the natural world, but increasingly, our daily activities are reducing the ability of our natural systems to support us.

It is evident by now that sustaining a healthy planet is a global citizenship project, and in recent years the initiative has taken root. As we move the College of Liberal Arts, Education, and Sciences forward, we are committed to Going Green. This is more than just recycling, using green energy and constructing LEED-certified buildings. It is also about being a sustainability leader and a good citizen of the world.

Historically, students have been the major drivers of Going Green in the college culture, but, to borrow a phrase, it takes a whole village. Our entire Rider community is prepared to do its part through strategic actions, curriculum changes, research and service projects, but as an institution that trains students for engaged participation in society, we must also teach them about the interdependence of actions. In support of this, we just launched a new initiative, "Sustainability Across the Curriculum," and we approved a new minor in Sustainability. For me, Going Green is not only a duty, but also a source of pride.

We have devoted this CLAES newsletter to showcase the contributions of our students, faculty and alumni to making this a more sustainable world for future generations. I invite you to enjoy these highlights, and as you reflect on them, try to tread softly upon the earth.

Please contact us if you would like more information about our "greening" initiatives or want to explore opportunities to work together. We welcome your energy and interest as we address the challenges of tomorrow.

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Under the Microscope

Christine Sookhdeo '12 Studies at Biosphere 2 in Arizona

Exploring and learning about different geographic regions has always been a source of fascination for **Christine Sookhdeo '12**, so when the resident of Trinidad examined the various baccalaureate environmental sciences programs available to her, she looked well beyond her native Caribbean.



Ultimately, Sookhdeo discovered that Rider's Department of Geological, Environmental, & Marine Sciences (GEMS) not only offered the courses she wanted in both the geosciences and environmental sciences, but the location offered her the chance to experience a wildly different climate and terrain than to which she was accustomed.

Recently, Sookhdeo was able to experience yet another radically different region of the United States when the junior Environmental Science major was one of just 10 students selected from across the country to intern at the University of Arizona's esteemed Biosphere 2, an enclosed ecological system center, surrounded by the Sonoran Desert in Tucson, Ariz. Sookhdeo's unique opportunity was the result of her participation in the prestigious Research Experiences for Undergraduates (REU) program from the National Science Foundation.

As part of the 10-week REU program, each of the students conducted their own research under a mentor, interacted with other scientists and participants, and presented their findings at a symposium. "They chose the students that they thought were the most qualified to do that kind of research," Sookhdeo explained.

Under the mentorship of Dr. Mitchell Pavao-Zuckerman, a research scientist and assistant professor with B2 Earthscience, Sookhdeo worked on research that established connections between environmental variability, the structure of soil food webs and biogeochemical cycling.

The project, entitled "Short Term and Long Term Effects: Environmental Conditions on N-mineralization and Nitrification Rates of Soil Samples in Arid Ecosystems," involved the analysis of the properties of various soil samples collected from the Upper and Lower Savannas of Biosphere 2. Sookhdeo conducted experiments to extract the inorganic nitrogen, as well as other tests to determine the amount of carbon contained in each subsample.

This fall at Rider, under the mentorship of GEMS' Dr. Daniel Druckenbrod and Dr. Hongbing Sun, Sookhdeo is pursuing an independent project stemming from her summer research at Biosphere 2.

"I've learned of the many different aspects that affect the environment and how those factors need to be taken into account when conducting research," said Sookhdeo, who also received merit scholarships from the Birdsall Services Group and the New Jersey Society of Women Environmental Professionals. ♣



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The Wright Stuff

Seneres: Rider Grads Have the Edge in Scientific Careers

With a knack and a natural enthusiasm for the sciences in general, **Wright Seneres '97** arrived at Rider University as an undergraduate with hopes of becoming a physician. The Voorhees, N.J., native actually spent nearly three years on the Lawrenceville campus studying pre-med before coming to the realization that he was not charting the course he preferred.

"Between my junior and senior years, I came to the conclusion that medicine was not where I wanted to be," Seneres said. "But I wanted to stay in the sciences. I was always interested in the environment, but I also knew it was an expanding field and that it could become a good career for me."

Seneres was able to quickly change his track and, today, is an environmental consultant for Bach Associates, PC, a civil engineering firm based in Haddon Heights, N.J., where he assesses environmental issues as required for commercial and residential development in the state of New Jersey. Though he has been with Bach since 2006, Seneres said environmental consulting is the only line of work he's been in since graduating from college.

"It was my first job out of school," said Seneres, who also earned a master's degree in environmental studies from the University of Pennsylvania in 2001.

In his role, Seneres studies proposed sites for new construction or redevelopment. He then issues a report outlining any environmental impacts, potential concerns, and what sort of remediation is required by law before work may proceed. Some undeveloped sites encroach upon areas designated as wetlands, while sites in need of redevelopment may be contaminated by prior construction or land use.

"Typically, cleaning up a site takes more time than preparing a new site to build," he said.



Seneres said he wasn't surprised to find work in his field so soon after graduating from Rider, particularly a job in his chosen field, given the University's reputation.

"Our science alumni do a lot of great things, and our science faculty do a terrific job – our graduates find work," he said. "Rider may be thought of by many as a 'business' school, but to me, it's a science school."

This occurred to Seneres a couple years back when he attended the Science Stairway of Fame inductions on Reunion Weekend. Seeing the plaques honoring Rider alumni for their varied accomplishments, Seneres felt compelled to help launch the Science Alumni Affinity Chapter, of which he is the co-chair.

"We've got about 50 official members now," said Seneres, who helped organize a Reunion Weekend field trip for science alumni to the Hamilton-Trenton Marsh, spanning Bordentown and Trenton, N.J., during Reunion Weekend 2010 in June. There, Dr. Mary Leck, professor emerita of Biology, presented a lesson on freshwater marsh ecology and preservation to a group of engaged Rider grads.

"It was really well attended, and everyone had a lot of fun," Seneres explained. "We'll see what we can do this year to follow up on that."

In 2011, affinity group members will be presenting their professional stories at casual seminars for freshmen and sophomores. The intent of the seminars is to convey the wide variety of careers available to students of science beyond the bench, hospital or classroom. Alumni understand what it is to be a Rider student and may be able to provide current students with a relevant and broader perspective on opportunities for life after college. Seneres will be one of the first presenters. ■

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Sustainability Takes Root

Hyatt 'Leafing' No Stone Unturned in Greening Rider Students

Sustainability matters to **Dr. Laura Hyatt**. As someone who has devoted her career to researching the complex, delicate balances of the earth's ecosystem, Hyatt understands the urgency of science to educate our world on the pressing need to reduce over-consumption, waste and the introduction of harmful toxins into the biosphere. Naturally, humans play the most vital role in the process.

"People shape nature," said Hyatt, the new assistant dean for the Sciences in the College of Liberal Arts, Education, and Sciences. "And nature shapes people."

Nature has helped shape Hyatt since she was in seventh grade, when she opted out of a more standard middle-school experiment in favor of something a bit more fulfilling.

"I had a great science teacher who, rather than making me dissect a frog, allowed me to do an ecology project centered on a local pond," Hyatt recalled. "I gained a real understanding of the interactions between the various forms of life and the pond itself."

Hyatt's interest in ecology was sustained through high school and at Smith College, where she immersed herself in population biology – the branch of biology that studies a group of interbreeding plants native to a region – and was set on a course of study that would propel her through her doctoral studies at the University of Pennsylvania.

The balance of nature is rather fragile, reports Hyatt, providing the example of garlic mustard – *Alliaria petiolata* – a species integral to her ongoing research into population dynamics. Native to Europe, garlic mustard was introduced to North America in the late 19th century as a food crop,

"but there is not a lot that eats it, so it's able to expand and grow almost unchecked," said Hyatt of the plant. "It also squirts certain chemicals into the ground that inhibit the growth of fungi living there – fungi that other plants need to survive. Fungi are our friend, and with the garlic mustard there, the native plants don't do well."

Because of the relationship between nature and another form of life – humankind – Hyatt team-teaches a course entitled Journeys in American Ecology and History, along with **Dr. Brooke Hunter**, associate professor of History. The class, part of the Baccalaureate Honors Program, explores how these two seemingly disparate factors reflect one another in the United States, as well as worldwide, using questions and approaches from both historiography and science.

"We started it to get students to understand how human history is shaped by the natural environment and the natural environment is, in turn, altered by human history," explained Hyatt, who also strives to help students understand the way people influence the environment in the present as a member of Rider's Energy and Sustainability Steering Committee (ESSC) and through her involvement with Sustainable Lawrence, a local consortium of residents, businesses, congregations, and other organizations dedicated to creating a sustainable community in Lawrence Township. Hyatt says the ESSC ultimately aims to enhance student awareness of the impacts of institutional actions, as well as their own.

"The ESSC wants to give graduates an experience from an academic and social perspective that enables them to make choices that impact the sustainability of the broader world," she explained. "Climate change is probably the No. 1 social, economic, scientific and political issue in the coming decades and Rider would be remiss if it weren't addressing it in a systematic way." ■



• Representing Venezuela, Rider's Model U.N. Team received two top honors, including the Outstanding Delegation award, the highest distinction a team can obtain, at the National Model United Nations Conference this spring in New York. The team was advised by **Dr. Barbara Franz**.

• One-hundred percent of Rider students in Educational Leadership passed PRAXIS exam to become school principals.

• **Emily DiPaolo '10** was recognized by the state Department of Education as a 2010 New Jersey Distinguished Student Teacher award recipient. The honor recognizes the 15 most outstanding prospective teachers in the state.

• English major **Rance Robeson '11**, the creator and editor-in-chief of *On Fire! A Literary Journal of the African Diaspora*, attended the prestigious Summer Institute for Literary and Cultural Studies (SILCS) at Wheaton College in Massachusetts.

• **Dr. Roderick McDonald**, a Guggenheim Fellow, had his National Endowment for the Humanities Landmarks in American History and Culture program, "Revolution to Republic: Philadelphia's Place in Early America," refunded for \$142,975 in 2011.

• **Amanda Morales '10** and **Kimyata Valere '10** began doctoral programs this fall on full scholarship as part of the Ronald E. McNair Scholars program. Morales will pursue a Psy.D. in Clinical Psychology at Rutgers while Valere will pursue a Ph.D. in Biomedical Sciences from the UMDNJ.