

Green Initiatives – Universities

By Matt L. Ottinger

Purdue GreenBuild Promotes LEEDership

Purdue University senior Sohag Patel started the GreenBuild program this year in hopes that he could persuade his fellow students – and future contractors – to think in more eco-friendly terms.

“Climate change is real and action needs to take place now,” says Patel, a senior majoring in construction management.

Patel explains the program grew out of a sustainable construction course taught by GreenBuild’s faculty advisor Kirk Alter, an associate professor of building construction management.

The purpose of Purdue GreenBuild is to educate faculty and staff of all majors and backgrounds who wish to learn more about green building standards by hosting related events and speakers. Patel notes the importance of incorporating Leadership in Energy and Environmental Design (LEED) standards into the educational mission while also working to invent new eco-friendly strategies.

“LEED buildings save you 30% in utility costs,” he notes. “You have to pay more up front, but you’ll make up for it in water and energy savings.”

He explains education will be critical because of the inherent challenges in LEED designing.

“LEED standards are very specific and it’s based on a point system, so you have to follow it very closely,” he notes. “Site selection is another important factor builders need to consider.”

Patel adds that the group recently hosted a presentation from a known LEED architect and filled an auditorium with 300 students and faculty. The addition of president France Córdova is also a boon for GreenBuild, according to Patel, who explains Córdova is working toward making Purdue a greener campus. In fact, during her April 11 inauguration speech she stated she favors a campus design that would make Purdue a “living laboratory for sustainability.”

Patel notes that as GreenBuild works to grow in the future, a priority will be to create a green construction research lab on campus, complete with sustainable HVAC systems and construction materials. He hopes it will include a sustainable health care room as well, pointing to the ongoing challenge of soaring health care costs.

“Sustainable health care is becoming a big issue now,” he explains. “New hospitals are being built all the time and are very interested in this because it provides a better healing environment with fewer utility costs.”

Resource: Sohag Patel, Purdue GreenBuild, at www.purdue.edu/sustainability/



Last year, Purdue University completed the \$33 million Roger B. Gatewood Wing addition to the Mechanical Engineering Building. The LEED building was Purdue’s first set to the standards of the U.S. Green Building Council.

Experimenting is Only Natural for Marian Chemistry Program

Shortly after his arrival as a faculty member five years ago, Marian College assistant professor of chemistry and 1997 graduate Carl Lecher started the green chemistry program.

“By integrating green principles into the chemistry curriculum, educators, in addition to teaching sound chemistry, have the opportunity to transform student perceptions about the role of chemistry in society,” Lecher writes in an e-mail.

He also explains the program is used to prepare future scientists, educators and policy makers to address “the global need to discover, develop and use sustainable chemistry.”

According to Lecher, chemistry is made “green” when it produces environmentally benign waste products. This is made possible by using alternative solvents that are less threatening to

humans and to nature, and can be disposed of via sanitary sewers.

The program, which has involved 12 undergraduates working on 18 projects, focuses on undergraduate research in the development of green procedures.

"The multifaceted program interlinks undergraduate research, the green organic chemistry laboratory curriculum and outreach to aid in the development and implementation of high school green chemistry experiments and practices," Lecher states. "I came to realize that there was an extremely limited supply of green educational materials available for high school science educators."

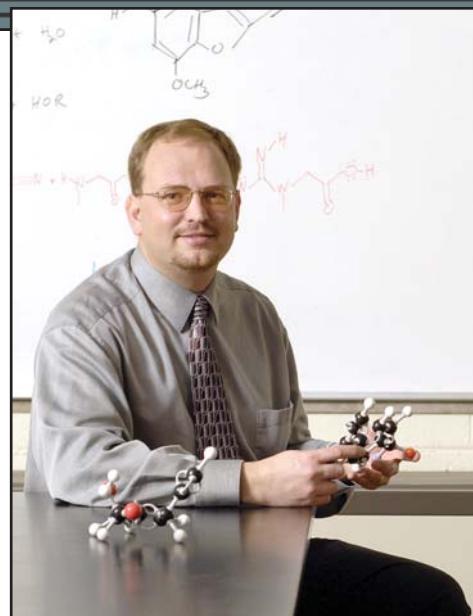
To combat this, Marian has developed eight high school laboratories, hosted a high school teacher workshop and has been offering educational resources to high schools via conferences, both regionally and nationally. Lecher adds that he hopes to eventually assemble a network of green chemistry high school teachers in Central Indiana.

He explains that one benefit of teaching green chemistry is that it is typically less expensive than traditional chemistry.

"One reason for this is that we have dramatically reduced the amount of solvent used in our sophomore organic chemistry lab and green research lab," he notes.

All told, the program "has brought distinction to Marian," according to Lecher. Because of his efforts, he will be a keynote speaker at the 2008 Green Chemistry in Education Workshop in Eugene, Oregon, and has been invited to speak about green curriculum at the 40th Central Regional Meeting of the American Chemical Society in Columbus, Ohio.

Resource: Carl Lecher, Marian College, at (317) 955-6005



Marian College assistant professor of chemistry Carl Lecher began the green chemistry program at the school, using alternative solvents that are more eco-friendly.

Council Helps Cardinals Soar Over Greener Pastures

While Ball State University may be best known for various academic programs, the school is striving to be a key player in the world of sustainability as well. The school has its own Council on the Environment, which has existed for nearly five years and focuses on all facets of sustainable practices campuswide.

According to Robert Koester, the council's chair and director of the Center for Energy Research, Education & Service, the group includes representatives at all levels across the campus, as well as businesses in the region.

"We serve as a clearinghouse for sustainability initiatives, and occasionally issue a resolution or an endorsement of a university program," he says. "We meet once a month and have met about 57 times (as of May 2008)."

Koester notes that in the past, the council has supported the university's sustainable curriculum and been active in seeking hybrid vehicles, LEED buildings and the removal of mercury on campus.

Incorporating the business community into the school's decision-making has been beneficial, and Koester explains many companies are now awaiting its graduates.

"We've received a lot of feedback that businesses are hiring people who have a working knowledge of sustainability," he asserts. "Virtually every kind of business is doing this, and they are looking for employees who can fill these roles."

Additionally, the BSU College of Architecture & Planning has recently added a sustainability concentration to its graduate architecture program.

"Last year we had seven or eight students enrolled, and next year we'll have 16," Koester says.

It seems Ball State's efforts are paying dividends in both recognition and prestige. The school was named one of the nation's Top 50 green universities by *Kiwi* magazine, a publication that promotes healthy and organic living.

The David Letterman Communication and Media Building on Ball State's campus is filled with "LEEDing-edge" technology. The building is also a model of sustainability and reflects the university's strategic plan, which states that all new buildings will be LEED-certified at the silver rating or higher.



Additionally, the Council on the Environment received Sen. Richard Lugar's August 2007 Lugar Energy Patriot Award for its collective efforts.

Koester believes accolades such as this and an increasingly green reputation will serve the school well in terms of attracting students.

"There is literature that says students are making decisions on where to go to college based on sustainability, so anecdotally this definitely has an impact," he asserts.

Koester contends the primary obstacle in promoting a green campus is making the change a systemic one.

"The biggest challenge is to continue to make it clear that no one office owns sustainability (at the university), and success requires the participation of everyone," he says. "Everyone has a role to play, and we have champions at all levels, including students and faculty."

Ball State has also been selected as one of over 90 schools to participate in the Association for the Advancement of Sustainability in Higher Education pilot program to test the Sustainability Tracking, Assessment, and Rating System and offer feedback to promote sustainability in higher education. In addition, the American Society of Landscape Architects awarded a group of Ball State students with its 2007 Student Award for designing a video game to use as a tool to teach elementary students about protecting and reclaiming natural environments.

Resource: Robert Koester, Ball State University, at (765) 285-1136

Indiana Offers 'Sustainable' New Program

A new eco-friendly degree program at Indiana University-Bloomington has warranted a "veritable avalanche" of inquiries from news media and others, according to John Mikesell, master of public affairs program director.

The new master's program – launched in February – provides a concentration in sustainable development in the School of Public and Environmental Affairs. Mikesell believes the concentration will create a new niche of graduates well-suited for the workforce.

"We believed there was a market for employment for students with these capabilities," Mikesell offers.

The school anticipates students graduating from this program, which requires a completion of 18 credit hours, will find jobs in government, think tanks, agricultural firms and other relevant areas. Courses in the curriculum include Natural Resource Management and Policy, Environmental Economics and International Environmental Policy, to name a few.

The goal of the program is to teach students to balance human needs and natural preservation in order for those needs to be met in the future. The school's web site invokes remarks from the Brundtland Commission's (formally known as the World Commission on Environment and Development) assertion that sustainable development "meets the needs of the present generation without compromising the ability of future generations to meet their own needs."

Mikesell adds that a world of natural preservation need not be one without thriving economies, noting that he's received

myriad e-mails stating the program is a "good idea," although he is not certain how many were from businesses.

"We have the view that sustainability does not mean economic stagnation," Mikesell states.

Resource: John Mikesell, Indiana University, at (812) 855-9485



Indiana University students in professor Ken Richards' class plant trees in the carbon grove for the School of Public and Environmental Affairs.