TONES FROM THE TOOTH
Jeffrey C. Silvertooth, Department Head

Many experts and critics have suggested that universities should be run more like businesses in an effort to gain more efficiency in the management of programs and resources, and many institutions have followed this advice. In the past few years, the leaders of the University of Arizona have decided to embark upon the implementation of a system of financial management referred to as Responsibility Centered Management (RCM).

The essence of the RCM approach is to return revenues to units (colleges and then departments) in direct response and proportion to their productivity in generating that revenue stream. In a complete sense this would include indirect cost return funds from research grants and tuition remission funding. Another aspect of the “complete” approach would also involve charging departments for utilities, services, space, etc. The first level of implementation at the UA is centered primarily on the distribution of tuition dollars to academic units.

The basic RCM formula for the distribution of funds to any given unit associated with instruction, as it stands at the time of this writing, is for the total RCM-related revenue to be based on: A) 70% from student credit hours; B) 25% from the number of students enrolled in a degree program; and C) 5% based on the number of graduates emanating from the program or unit. The funds for any given year are calculated using the A, B, C factors listed above in relation to a “delta” value that is a function of change (growth or decline in these factors for the unit) from year to year. The variable nature associated with the delta values, the changing dynamics in the operation of the RCM models that are deriving the related values, and the newness of the system has produced a high degree of uncertainty among units in terms of how best to manage their programs in an RCM environment.

We have now had approximately two years of development and early implementation of the RCM program at the UA. We are still working in an extremely variable environment and we are all working to establish some stability and a working knowledge of this new system. Many units are working and developing creative “business and marketing” plans and strategizing energetically to capitalize on the RCM system. The current strategy in the SWES Department is to follow these basic principles: 1) develop and direct strong programs in Environmental Science and with the Sustainable Plant Systems degree programs that we direct; 2) attract and retain a robust student population in these programs; 3) do an excellent job in advising; 4) teach high quality classes; and 5) graduate as many students as possible with a solid education and a good prospect for gaining productive employment.

So we are going to focus on the basic elements of a good quality educational program in the SWES Department. We will watch and study the RCM system and develop flexible approaches for best efficiency as this system matures and we experience better stability and predictability in this new system over time.
SWES REPORT CARD

PUBLICATIONS


PRESENTATIONS


Bruce Russell wins ‘Best of Show.’ Photography, in UA staff art exhibit

Bruce Russell, a SWES staff member, won Second Place/Intermediate and Best of Show in Photography in the On Our Own Time UA staff art exhibit. His winning photo, ‘Manifest Destiny,’ is shown above.


CONGRATULATIONS

Irene Liang, an Environmental Science major, has been selected as a recipient of the Udall Scholarship for 2012-2013.

Melanie Lenart published a Scientific American online story describing how land use change was affecting the local hydrology in San Luis, Argentina (http://bit.ly/HF4tPF). The research was supported by the Inter-American Institute on Global Change Research.

Rachel Maxwell has been selected as the Spring Semester 2012 Outstanding Graduating Senior in Environmental Science.

Sharon Megdal, director of the Water Resources Resource Center and a SWES faculty member, received the Leading Edge Award at the University of Arizona Innovation Day. This annual awards program provides the entrepreneurial community the opportunity to preview cutting-edge research. Although past awards usually have been associated with technology, this year’s award to Dr. Megdal recognizes her groundbreaking work linking water conservation to environmental enhancement. A video outlining her work can be viewed at: http://bit.ly/IX4KeG.

Susanna Pearlstein won a $1,000 Dissertation Improvement Grant from the UA Institute of Environment.

Pearlstein, a current SWES graduate student, also was selected as a Carson Earth Scholar for the 2012-2013 academic year. The fellowship supports students with an interest in research and a commitment to environmental communication. Students are assigned a faculty mentor and receive training in communication skills to explain and promote their work.

Alyssa S., who finished her bachelor's degree in Environmental Science in 2003, received a Ph.D. in 2010 from the University of British Columbia in Vancouver. She is now working as a postdoctoral researcher at the University of Illinois, Champaign-Urbana, exploring the use of uranium isotopes for groundwater monitoring of a contaminated site in Colorado. She recently sent an email to Dr. James Riley: "I think so highly of you and the UA Environmental Science program. I really enjoyed my time as a student there. The program prepared me well for doing my Ph.D., and your advice and encouragement are still appreciated."
DEPARTMENT NEWS

SWES faculty researches bomb-eating bugs

The UA has been given a $1 million grant to conduct studies on the environmental effects of insensitive munitions compounds (IMCs). Researchers, which include SWES department members Jon Chorover and Leif Abrell, seek to find bacteria that can break down IMCs to help them degrade in a safe way. This grant was given by the Strategic Environmental Research and Development Program, a Department of Defense partnership. Currently not much is known about IMCs, which are new, more stable explosives that won't detonate in response to heat or shock. For more, see: http://uanews.org/node/46427.

Tuller appointed to soil, hydrology posts

Markus Tuller was elected as chair-elect of the Soil Science Society of America S-1 Soil Physics Division. He will serve as chair-elect in 2013, chair in 2014, and past chair in 2015. Tuller, who recently was promoted to full professor within SWES, also was appointed associate editor of the Journal of Hydrology.

SWES Day generates awards for students

SWES Day, held on March 29 as part of the University of Arizona’s Earth Week 2012, featured a variety of excellent talks and posters presented by graduate students within the department. Congratulations to all the students who worked hard and participated in SWES Day to make it a great success! The following students won awards during this year’s event.

For Oral Presentations, Corin M. Hammond won first place for a talk on Biogeochemical transformation of metal(oids) during phytostabilization, Iron King Mine tailings. Tarun Anumol and Eva Marie Levi tied for second place. Aditya K. Verma won third place, while Rebecca Lybrand received an honorable mention.

For Poster Presentations, Juliana Gil-Loaiza won first place for Scaling phytostabilization from greenhouse to field-scale at the Iron King Mine/Humboldt Smelter Superfund site. Eric Highfield won second place, while Monica D. Ramirez-Andreotta won third place. David E. Hogan received an honorable mention.

For the Abstract contest, Matthew R. Levi won first place for Estimating water residence times in southern Arizona with digital mapping, which he presented as a talk during the plenary session. Monica D. Ramirez-Andreotta won second place, while Juliana Gil-Loaiza took third place. Donald M received an honorable mention.

Virginia Rich, continued from page 1 and macroscale consequences, basic and applied motivations, and fundamentally cross-disciplinary opportunities. My subsequent Ph.D. spanned both terrestrial and marine microbial ecosystems, and a journey from the sunny expanses of Stanford to the giddily intense halls of the Massachusetts Institute of Technology. This time cemented my conviction that what excited me most about microbes were their connections to and roles in larger ecosystems.

One of the reasons I joined SWES was its interdisciplinary character. It not only houses multiple disciplines but actually integrates them in its research. After nine months in SWES, spanning a three-month family leave and the birth of a new child, I feel deeply appreciative of the diverse science and perspectives of the SWES community.

GRANTS

Ian Pepper and Shane Snyder. Monitoring for Reliability and Process Control of Potable Reuse Applications. WateReuse Research Foundation, $400,000, 03/01/12 – 09/30/14.

Kelly R. Bright and Masaaki Kitajima. Equipment grant awarded March 12, 2012 for a Roche LightCycler 480 Real-Time PCR instrument from the Water, Environmental and Energy Solutions Program administered by the Arizona Board of Regents.

Ian Pepper. Real-Documentation of Contaminant Destruction in Potable Water. WEES Research Grant, $40,000.

PLANE TALK FROM ERL

Ian Pepper, Director of the ERL

Plans for the construction of the new Water & Energy Sustainable Technology Center (WEST Center) continue to move forward. The 22,400-square-foot building will be constructed by Pima County Wastewater as part of a new Water Reclamation Campus. The Center will be under the auspices of two colleges: Agriculture and Life Sciences (Shane Burgess), and Engineering (Jeff Goldberg). Ian Pepper and Shane Snyder will co-direct the center. As part of the WEST Center, ERL will be moved into the new facility. The new WEST building will contain administrative offices, conference rooms, and student study areas. Laboratories will include a molecular microbiology lab, a real-time sensor lab, an aquatic toxicology lab, hi-bay labs for intermediate field-scale treatment trains, and a wastewater treatment lab.