

Preparing for the Future

University establishes water management degree program

Texas A&M University launched an interdisciplinary water management degree program during the fall 2005 semester with 12 students seeking either master's or doctorate degrees in water management and hydrologic sciences.

The degree program, the first in Texas, includes 42 faculty members in 12 departments from four different colleges, said Ron Kaiser, program chairman.

“Our program is unique because it is not housed in one department. It’s not department-specific, but degree-specific,” Kaiser said.

Kaiser, a professor in the Department of Recreation, Park and Tourism Sciences, said the degree program will prepare high-quality graduate students for careers in the critically important areas of water management and hydrology, and will serve as the cornerstone of the university’s new water program.

Kaiser said the interdisciplinary character and

practical orientation of this degree program reflects the growing complexity of water issues.

“In an increasingly complex world, seeking solutions to water problems requires crossing traditional departmental and disciplinary boundaries,” Kaiser said. “This program achieves that goal by bringing together faculty from across the university community to guide students.”

Kaiser and John Giardino, dean of graduate studies and a professor in the Department of Geology and Geophysics, worked with a team from the Colleges of Agriculture and Life Sciences, Engineering, and Geosciences to develop the curriculum and program. Using information from a National Science Foundation report that recommended an integrative approach, they developed the multi-college, multi-department water program.

“There will be tremendous job opportunities for A&M graduates of this program,” Giardino said.



(Left) Water Management and hydrologic sciences graduate student Alyson McDonald downloads data from a data logger. McDonald is studying groundwater and surface water hydrology at Texas A&M to compliment her background in soils and plant ecology.

(Right) Master’s degree candidate Nick Russo works with the Harris County Storm Water Quality program and oversees the construction enforcement and post-construction storm water controls for new developments or significant redevelopments.

“We’re preparing students for being water leaders for tomorrow.”

One of the master’s degree graduate students, Nick Russo, already works in water management for the Harris County Storm Water Quality program. When searching for a graduate program to pursue, Russo said he examined A&M’s new program. “I felt that this (program) was my shot at completing a master’s degree in this growing field.”

Russo agreed with Giardino about the job opportunities for water managers.

“I believe that water quality and quantity needs will be in the forefront in the coming years,” Russo said. “Demand is obviously going to be high for those willing to attempt solving our water needs.”

Doctoral student Alyson McDonald, who works as an Extension assistant in hydrology for Texas Cooperative Extension in Ft. Stockton, said the degree program was “a perfect fit with my degree plan.”

After receiving her doctoral degree, McDonald plans to continue hydrologic research in arid environments in southwestern United States and northern Mexico.

Kaiser said this master’s degree will prepare students to manage public water systems and water resources in cities, counties, river authorities and other entities.

The doctoral degree is designed to give students a thorough and comprehensive knowledge of water



science and hydrology and training in methods of research.

“Over the past 25 years, population shifts, industrial developments, changes in water law and advances in technology have intensified competition for water resources and place new burdens on planners, policy makers and managers,” he said.

In addition to the graduate degrees, the water program consists of integrative water research and outreach programs, Kaiser said.

Objectives of the program are:

- To foster faculty collaboration in developing a state, national and internationally recognized program in water management and hydrology,
- To prepare students for professional and academic careers in the water management and hydrological sciences in Texas and at the national and international levels,
- To create and sustain a teaching and research environment that brings together a variety of professions and disciplines for an exchange of knowledge about the unique attributes of managing water,
- To provide a teaching and research base for an ongoing series of research collaborations, lectures, seminars and workshops that will improve communication and exchange of knowledge between Texas A&M University students, faculty and professionals around Texas and the nation, and
- To assist in protecting homeland security of public water supplies.

The Texas A&M University System Board of Regents approved the degree program in December 2004 with a \$2.5 million, five-year budget and the Texas Higher Education Coordinating Board approved the program in March 2005.

For more information, go to <http://waterprogram.tamu.edu> or contact Dr. Val Silvy, vsilvy@tamu.edu. 