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DESIGNING AN INTERDISCIPLINARY GRADUATE WATER DEGREE*

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***Oral Presentation**

**** Principle presenter and contact person**

Water is the keystone resources required to sustain human life, a viable economy and a livable environment. Over the past 50 years, population growth and shifts, economic development, technologic innovation and changing political systems have intensified competition for water necessitating a greater emphasis on the integrative and adaptive management. The need for a paradigm shift in water management was succinctly outlined by The National Research Council's report to NSF entitled "Opportunities in the Hydrologic Sciences" advocates a multidisciplinary approach to addressing graduate water education. In response to this challenge Texas A&M University is developing an interdisciplinary graduate curriculum. The following discussion outlines the faculty planning process, proposed program, curriculum and administrative structure for the program.

Objectives

- (1) Develop an interdisciplinary curriculum and intercollegiate faculty crossing traditional department and college boundaries to provide students with science, engineering, managerial and other technical courses.
- (2) Create and sustain a teaching and research environment that brings together a number of professions and disciplines for an exchange of knowledge about the unique attributes of managing water.
- (3) Avoid having a single discipline, or academic department, govern the program.

Process

- (1) Inventory graduate water degree programs at U.S. universities.
- (2) Inventory graduate water degree programs Texas universities.
- (3) Inventory of graduate water courses at Texas A&M Universities.

- (4) Convene a committee of Texas A&M faculty from the Colleges of Agriculture, Architecture, Engineering and Geosciences to develop a graduate water curriculum.

Program Structure

The Water Management and Hydrological Science Graduate Degree Program is the cornerstone of a new Texas A&M University signature water program. The program will consist of:

- (1) graduate teaching;
- (2) integrative and focused water research; and
- (3) public and professional educational out-reach programs.

Faculty in this program have water as the centrality of their teaching, research and professional service activities.

Degree Options

Students will earn one of the following degrees:

- (1) a Master of Water Management degree (36 credit hours: non thesis).

This degree is designed for students with diverse backgrounds who wish to emphasize water economics, policy, administration, management and planning. It is designed for students who are planning a professional career in managing public water supply systems.

- (2) a Master of Science (32 credit hours with a thesis).

This degree is designed primarily for students with technical and science backgrounds who wish to complement their primary discipline by obtaining scientific/technical expertise in water. It will also serve as a preparatory degree for the Ph.D.

- (2) a Doctor of Philosophy requiring 64 total semester credit hours for students with a masters degree, or 96 semester credit hours for students entering with a bachelors degree.

Program Administration

1. Council of Participating Deans, supervised by the Vice president for Research will administer program.
2. Degrees will be granted by Texas A&M University under the guidance of an intercollegiate faculty. Any faculty member is technically eligible to be part of intercollegiate faculty. Intercollegiate faculty will be established with an executive committee and a water chair to direct and supervise program. The water chair will report to the Council of participating Deans.