

# **Certificate Assessment Plan: Wetland and Water Resource Management 2012-2013**

**Institutional Assessment  
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*Office of the Provost*

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*Institutional Assessment*

*Continuous Quality  
Enhancement Series*

Wetland and Water  
Resource Management

College of Agricultural and  
Life Sciences

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# Wetland and Water Resource Management

## College of Agricultural and Life Sciences

### *2012-13 Certificate Assessment Plan*

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#### **A. Rationale**

The sustainable water resource management challenge is to provide sufficient water resources for human needs while at the same time maintaining valuable ecosystem services provided by water in natural systems. Training future scientists and managers to protect wetland and water resources is one of the primary missions of the Soil and Water Science Department, and of the discipline in general. Recent offerings of courses in the Wetland and Water Resource Management certificate program have been taken by students employed by state and federal agencies and private industry who would be well served by such a certificate program.

#### **B. Mission**

The Soil and Water Science Department's (SWSD) programs are designed to meet the changing needs of our clientele at state, national, and international levels. To meet new challenges and explore new opportunities, the SWSD's research, teaching, and extension programs are focused in five areas, with broader implication to water quality, carbon sequestration, greenhouse gases, and climate change:

- Nutrient, Pesticide, and Waste Management
- Soil, Water, and Aquifer Remediation
- Carbon Dynamics and Ecosystem Services
- Landscape Analysis and Modeling
- Wetlands and Aquatic Ecosystems

The Wetland and Water Resource Management certificate program broadly supports the missions of the college and university to serve the nation's and state's critical needs in the areas of wetland and water resource management by contributing to a well-qualified and broadly diverse citizenry, leadership and workforce.

### C. Student Learning Outcomes (SLOs)

1. Describe the hydrologic cycle, soil-water interactions, and how anthropogenic activities influence water balance and water quality.
2. Describe wetland processes, types of wetlands and the role wetlands play in watersheds as related to overall ecosystem functions.
3. Describe and quantify various management practices conducted within, and around wetlands and water resources; to protect, restore, manipulate, or provide for improved ecological and/or anthropogenic value.

### D. Assessment Timeline for Certificates

Wetland and Water Resource Management                      College of Agricultural and Life Sciences

Assessment of SLOs will be done using a competency exam upon completion of the required number of course credits.

SLOs	Courses	Competency Exam
#1		X
#2		X
#3		X
#4		X

### E. Assessment Cycle Chart for Certificates

Wetland and Water Resource Management                      College of Agricultural and Life Sciences

Analysis and Interpretation:                      May – June annually  
 Improvement Actions:                              Completed by August 1 of each year  
 Dissemination:                                        Completed by September 1 of each year

SLOs	Year	12-13	13-14	14-15	15-16
#1		X	X	X	X
#2		X	X	X	X
#3		X	X	X	X
#4		X	X	X	X

## F. Methods and Procedures

Instructors of core courses in the certificate program will submit a minimum of 10 questions each that will test student's achievement of the Student Learning Outcomes associated with these courses. These questions will be compiled into a single on-line examination. Students will be required to score a minimum of 85% correct to pass the exam. The exam may be taken multiple times if necessary.

## G. Assessment Oversight

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