

Citizen Involvement and Volunteer Monitoring: The Community Lab for Water Quality Education

CRN 81753 UNST 421 PSU Capstone Summer 2013

Course Dates: June 24th – August 16th

Course Time(s): Tuesday & Thursday, 8:00 – 10:20 Tuesday Field (allow up to an hour travel time back to campus)

Thursday PSU Campus Classroom SB2 Rm. 149

Required additions:

Damascus Days – Saturday, July 27th – all day, 8 am – 4 pm

Watershed Council Meeting – Thursday, August 15th, 6-9 pm

Instructor: **Mary Ann Schmidt** (503) 725-2343, maryanns@pdx.edu
Office: Science Bldg 1 Rm. 103

Office Hours by arrangement

Text: Riparian and Aquatic Ecosystem Monitoring: A Manual of Field and Lab Procedures, 4th Edition 2003 – Available from SWRP, \$30.00

Course Outline: D2L

Course Description: This class will implement a watershed education and monitoring project involving community members in the assessment of water quality. Capstone students will also put on an interactive learning exhibit at a local community festival - Damascus Days; work with local land owners to obtain water samples; analyze water samples, develop a feedback system to provide volunteers and creekside landowners with information on the quality of their local surface water, and report findings to the Clackamas River Basin Council. This course involves field work, communication of scientific information to a lay audience, and exploration of the role of public education and volunteer mobilization to monitor and improve water quality.

The Student Watershed Research Project (SWRP) is a long-term riparian and aquatic monitoring program that couples watershed education with the collection of high quality data.

SWRP will be working with the CRBC (Clackamas River Basin Council), who have funds to support PSU capstone students engaged in monitoring projects on both public and private sites. Students will also provide outreach and youth activities during a local community fair.

The Goal: Involve area citizens in their own education about water quality as a means to build toward change in the actions of everyday citizens. These actions will help reduce pollutants carried by storm water in urban areas and run off in rural areas.

Course Learning Goals:

Learn the technical lab and field skills used in water quality monitoring.
Gain an understanding of the Clean Water Act and the current issues surrounding water quality standards.
Learn to use various tools for data analysis including data management in a database and data analysis.
Explore the concept of environmental stewardship including: <ul style="list-style-type: none"> · Incentives and challenges to involving citizens in scientific data collection · Environmental stewardship from different perspectives, i.e. urban, rural, agriculture, forestry, fishery
Learn to communicate the scientific and legal jargon of these topics into lay terminology and concepts for the public at large.

CAPSTONE LEARNING OBJECTIVES

Communication

Learn to communicate the scientific and legal jargon of these topics into lay terminology and concepts for the public at large.

Critical Thinking

Learn the technical lab and field skills used in water quality monitoring.

Learn to use various tools for data analysis including data management in a database and data analysis using statistics

Working in a Diverse Society

Learn to communicate the scientific and legal jargon of these topics into lay terminology and concepts for the public at large.

Explore differing value sets and their implications for environmental stewardship

Opportunities for community based education focused on citizen science across ethnic, cultural, socio economic student population

Also, diversity of the capstone learning community – related to major fields of study, ethnic/cultural, demographics, and values

Social Responsibility

Gain an understanding of the Clean Water Act and the current issues surrounding water quality standards.

Explore the concept of environmental stewardship including:

- Incentives and challenges to involving citizens in scientific data collection
- Environmental stewardship from different perspectives, i.e. is a forested plot – open space or is it a tree farm? What are its purposes and how are they prioritized? By whom?

GRADING

Class/Field Participation - 40%

This is an intense course, taking place in a short amount of time. On-time attendance, fully present, prepared, engaged and involved in the day's topics and discussions is required for all classes and activities.

Attendance and participation:

50% - 14 regular class periods

35% - Saturday Monitoring and Outreach Event July 31st

15% - Clackamas River Basin Council Written Report and Presentation August 11th

Writing Assignment - 20%

Due: Thursday Aug. 16, 2012 end of class

The topic of debate woven through this course will focus on environmental stewardship, education and the challenges of engaging individuals in our society in the care of natural resources. What are the different perspectives on stewardship in our society? Do different people see different things when they look at the same plot of land? How do we reconcile these differences and effectively improve and sustain the health of natural resources such as water.

There will be a final writing assignment that focuses on these topics, as well as reflecting on course readings and your experience in the community. The reflective writing assignment is worth 20 percent of your final grade and will be graded as follows:

Grammar, punctuation and organization	5 points
Content (meets the requirements of the assignment)	5 points
Critical Analysis	6 points
Synthesis	4 points
Total	20 points

Group Assignments and Final Products – 40%

- Watershed Assessment Reports– 30%
- Data Analysis and Final Report – 70%

Each group assignment is worth the above portion of your group assignment grade. Points will be given based on the following criteria:

Appropriate use of visual aids	16%
Grammar, punctuation and organization	16%
Demonstrated participation in the group	20%
Content	24%
Clarity (is it understandable to the intended audience?)	24%

Points	Grade	Points	Grade	Points	Grade
>91%	A	80%	B -	68%	D +
90%	A -	78%	C +	60%	D
88%	B+	72%	C	<60%	F
82%	B	70%	C-		