Portland’s Water: From Forest to Faucet

PSU Capstone Class, Spring 2016

UNST 421 564

Tuesday/Thursday 2:00 - 3:50

CH 325

Course Description: This course is designed to give students an opportunity to learn about tap water and create community outreach products for the Portland Water Bureau, which is our community partner for this class. This class will focus on the Bull Run watershed (the source of Portland’s drinking water) and the workings of the Portland Water Bureau. We will learn about the history of the water system, the delivery system, water quality, regulations, current issues, and other topics that peak our interest during the term. The class will work with the Water Bureau to develop community outreach products to inform our fellow citizens about our water system.

Professor: Catherine Howells,PhD

Office hours: By appointment

Cell Phone: 503-929-5539

E-mail: chowells@pdx.edu

Community Partner

Portland Water Bureau

1120 SW 5th Avenue 5th Floor

Portland, OR 97204

website: portlandoregon.gov/water

Liaison: Ross Turkus

(503) 823-1038

Ross.Turkus@portlandoregon.gov

City Resources

Stanley Parr Archives and Records Center

PSU Recreation Center, 5th Floor

website: portlandonline.com/auditor/index.cfm?c=26978

File search: portlandonline.com/efiles

Contact: Brian Johnson

Guiding Principles

Capstone courses are designed to provide an opportunity for you to apply your expertise (developed in your major and in University Studies) to real issues and problems in our local community. They are designed to enhance each student's ability to collaborate with other students and the Capstone partner within a team context. Finally, they are designed to encourage active involvement in the community. This Capstone will be a hands-on experience that will require your flexibility and willingness to stretch and explore as individuals and in the group work. Capstones are unique opportunities to use what you have learned as a student at PSU for the enrichment of the larger community.

Course Objectives (skills both University Studies and I want you to posses after completing this course):

* The ability to do research, writing, and presentation in written and visual formats. UNST Goal: Inquiry & critical thinking (research; response journal; discussions)
* The ability to understand the historical record, written or visual, as integral to understanding social inquiry in general, with an emphasis on issues of public history. UNST Goal: Inquiry and critical thinking (research; response journal; discussions)
* To have hands-on experiences creating community outreach products and to enhance students' facility and confidence with written and oral communication. UNST Goals: Communication (between classmates; between the class and our partner; with the public)
* The ability to work collaboratively, with an emphasis on making interdisciplinary connections in your various assignments and projects. UNST Goals: Variety of human experience; Social Responsibility
* To develop a meaningful public outreach product for the community partner.
* UNST Goals: Communication; Variety of human experience; Social Responsibility
* To facilitate students' building of healthy and functional relationships around both differences and likenesses experienced within the classroom community and with the community partner's constituencies UNST Goal: Appreciation of diversity

Participation

Capstone classes depend on regular attendance for the group process to work and the individual student to be successful. Each student's ability to meet individual and collective deadlines is critical. This means that you show up on time to class and do not leave early. However, constructive participation constitutes more than just showing up to class. You should come to class:

* Ready to contribute to discussion, planning sessions, and small group work (your contributions here will indicate that you read the assigned materials or completed out-of-class assignments)
* Prepared for team and class work sessions (bring notes, ideas, and appropriate materials)
* Willing to take on additional tasks when appropriate

Each student has one excused absence (contact me by phone message or email prior to class). It is your responsibility to make up work time missed in class and coordinate how to make up work that your classmates/group are depending upon you to produce.

Partner assignment: Water Bureau Community Outreach Products

I will use the following guidelines to assess each team’s final product:

* Product was completed
* Team met project deadlines
* Product shows exceptional initiative, care, and the effort of all team members
* Product served partner needs
* Changes suggested by the community partner and/or the instructor were made
* Product and final presentation were professional

Response Journals

Each response journal entry should include most, if not all, of the following:

* Connections between the readings, research, class discussions, meetings with community partner, etc.
* Critical analysis of your research and a personal response to your work
* Responses of what you are learning in this process and how this relates to your overall experiences as part of PSU and the broader Portland community

Submitting Journal entries

All journal entries should be submitted as printed or handwritten copy in class on the due date. I do not accept late assignments without communication before the due date.

Response Journal Instructions

#1 2-3 pages on your initial impressions of the class and your learning. DUE April 19

#2 3-4 pages comparing Portland to another city in the United States. This comparison should include source water(s), water quality, history, and challenges. Water utility and EPA websites are good sources of information. You might also like to search local media reports on the water utility. Cite your sources. DUE May 3

#3 3-4 pages on any world water issue. You can discuss a country, a region, the water-food-energy nexus, privatization of water supplies, water scarcity, climate change effects on water supplies, or anything else that peaks your interest. A few sources: Circle of Blue, National Geographic, and Water for People (for information about NGOs and the challenges of helping the world get clean water). Cite your sources. DUE May 19

#4 2-3 pages (or more) on what you have learned in this class, the value of your project, and your final impressions of water utilities and the class. DUE at Exit Interview

I will comment on each paper based on the following criteria:

Paper responds completely to the writing instructions

Paper is well-organized and free of grammatical errors

Paper demonstrates critical analysis

Paper demonstrates synthesis with other course components, another course or your life experience

Time expectations

Capstone courses are intensive classes. Our class sessions will be used to learn both theory and practical processes to accomplish our group and individual projects, and hear from experts from the Portland Water Bureau. In addition to the time you spend in class, you will also need to schedule time to do the assigned readings, write your response journals, complete tasks related to the final public presentation, conduct research and create the content of your contribution to the community partner product.

This is a 6-credit course. Some of your group work on the final projects may take place in the classroom. However you will need to maintain regular phone, email and in-person contact with your group members throughout the term to ensure a successful product. Please plan for approximately 3-4 hours outside of class time each week to work on your product.

ADA Modifications

Please see me if you have a disability that may require some modification to the course. I will work with you and the Disability Resource Center to arrange needed supports.

Plagiarism and Codes of Conduct

A productive learning environment relies on our adherence to PSU Codes of Conduct: http://www.pdx.edu/dos/policies-codes-of-conduct-at-psu. In particular, please note that plagiarism will not be tolerated in this course. If you are quoting or relying heavily on another's work in your written assignments or class presentations, you must acknowledge the source appropriately.

Course Grading Criteria

Your final grade will be based on the following:

Attendance at class sessions and field trips 30%

Participation in classroom sessions and field trips 20%

Response Journal Papers 20%

Community outreach team product 30%

Your final grade will be decided in conversations between me and each student during the 10 - 15 minute Exit Interview, when each student will be expected to discuss what grade he/she thinks is deserved.

Instructions for submitting Final Work to PSU and PWB

Final projects must be submitted on a thumb drive or CD. These files will be collected and loaded on the day of your final presentation to the Water Bureau. Thumb drives will be returned.

Each team must compile a digital file folder with all of their work included (source files, final presentations, final product, etc.) This folder will be archived at PWB and with Catherine Howells.

Naming of the folder: Include your team name (i.e. “Bull Runners”), the type of product (PSA, Board Game, Film, Brochure, etc.), and the TERM (Fall 2014)

Naming Individual Files: The individual file title must be descriptive and dated (i.e. “PWB Mktg. Plan Powerpoint 6.11.2014”

Include:  All source files and references, with dates, and final products already downloaded from the cloud (we don’t want to have to go looking for it later).

Final presentations must be in Microsoft PowerPoint format and included in the folder.

All films/videos must be compatible with Quicktime Player and Microsoft Media, submitted on a disk.

Text and Partial List of Sources

Short, Casey, *Water: Portland’s Precious Heritage*, 2nd ed. ,2011. City of Portland [CD]

American Water Works Association: awwa.org

Environmental Protection Agency: epa.gov/safewater

Circle of Blue: [circleofblue.org](http://circleofblue.org)

**Spring 2016 Portland’s Water Capstone Calendar**

Tuesday/Thursday 2:00 - 3:50

CH 325

Mar 29 Introduction to Capstone and to each other. Urban Ecology and Infrastructure. How does water get to the tap/where does it come from? Emails.

*Reading: Chapters 1-5*

Mar 31 **Ross Turkus**: Liaison with the Portland Water Bureau: Portland’s water system and working with the Portland Water Bureau. The distribution system. Governance. Budget

\*First response journal instructions (initial impressions)

*Reading: Chapters 6-8*

Apr 5 **Managing the Bull Run Watershed with Liane Davis, Resource Protection and Planning, PWB Fir Creek Room, 3rd Floor**

*Reading: Chapters 9-12*

**Apr 7 TOUR OF BULL RUN WATERSHED (9-5)** Lisa Vieno

Meet in front of Smith Student Union on Broadway at 8:45

Apr 12 Overview of the System — Regulations, pipes, politics, big projects

**Apr 14 Mapping the Delivery System with Geoff Chew -- PWB Interstate Facility (meet at Mississippi/Albina Yellow Line Max stop by 2:10)**

Apr 19 PWB Maintenance with Ty Kovatch, Director Maintenance and Construction, PWB

\*First response journal due

Apr 21 Ideas for product deliverables. Teams. Product Plans.

\*Second response journal instructions (comparison with another US

city).

Apr 26 Washington Park Reservoirs with Teresa Elliott, Chief Engineer, PWB

Apr 28Review of draft products with Water Bureau with Ross Turkus

\*Third Response journal instructions (world water issue)

**May 3 Corrosion and** **Protection of Pipes, Stu Greenberger, Senior Engineer (and Arborist) PWB Fir Creek Room, 3rd Floor**

\*Second response journal due

May 5 Aging Infrastructure and Asset Management with Mia Sabanovic, David Demchak, and Jessica Letteney, PWB

May10 Managing Water Quality. Chris Wanner, Director Operations, PWB

May 12 TVWD and regional water issues with Mark Knudson, CEO, Tualatin Valley Water District

May 17 Seismic Resilience and the PWB Response to Hurricane Katrina with Mike Stuhr, PWB Administrator/Director

**May 19** **Finance, Billing and Customer Service with Cecelia Huynh, Director Finance, and Kathy Koch, Director Customer Service,**

**PWB Fir Creek Room, 3rd Floor**

\*Third Response Journal due

May 24 Experiences at PWB, David Shaff, retired Administrator/Director

May 26 Practice final presentations with class input

\*Final response journal instructions

**May 31 Formal presentation of products at WATER BUREAU Fir Creek Room, 3rd Floor**

Jun 2 Lessons learned.

\*Final response journal due at Exit Interview

Sign-up for Exit Interviews