

# SYLLABUS 2010

## Unit Operations in Environmental Engineering - CE 474/574

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**Mon/Wed 4:00 -5:50 PM, Room 310 Engineering Bldg**

**Instructor:** William Fish, Ph.D.

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**Course Webpage:** <http://www.ce.pdx.edu/~fishw/UO-Readings08.htm>

**Office Hours:** Monday & Wednesday 2:00-3:00 PM, or by appointment

**Course Objectives:** This is an introductory course on the treatment of public drinking water supplies and municipal wastewater. Students will learn the most widely used techniques for treating water or wastewater so that it meets state and federal water quality requirements. Student will develop an understanding of quantitative and engineering principles related to the topic, including scientific fundamentals such as chemistry, microbiology, mass transfer. Students will learn and apply engineering design principles for unit operations, including design methodology, design criteria, regulatory requirements, economic considerations, and design alternatives.

Specific topics are presented in the web homepage schedule which can be found at:

<http://www.ce.pdx.edu/~fishw/UO-Readings08.htm>

**Textbook:** None required. Lecture notes and readings are posted on the homepage schedule site.

**Format:**

- Lecture and discussion during the class periods.
- Students are expected to complete each reading *before* class, be prepared to complete a short **preparation check** (“prep check”) on the reading at the start of each class, and discuss the material during class.
- The questions for the prep check are posted on the web in advance so that students can review the questions as a study guide.
- Design Assignments are assigned as homework each week; due *in class* on **Wednesdays**.
- Please refer to the **Course Home Page** on the web for complete information about readings, prep checks, and design assignments.

**Grading:**

Daily Prep Checks	-	10%
Design Assignments	-	40%
2 Midterm Exams	-	30% total
Final Project	-	20%

Note that Design Assignments are weighed heavily in the final grade, which should encourage students to keep up with the weekly assignments. The prep checks are also given significant weight to encourage you to read and comprehend every class reading.