



Course Syllabus
Solid Waste Management and Environmental Health
ENVH 445
Fall Quarter 2016
(3 Credits)

Course Meeting Times and Location

1:30 - 4:20 p.m.
Friday
Room E-216 Health Sciences Building

Course Instructor

Tania Busch Isaksen, Lecturer
Department of Environmental & Occupational Health Sciences
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Office Hours: By appointment.

Learning Objectives

It is intended that at the completion of this course, each student should be able to:

1. Identify and discuss the public health, regulatory, planning, technical, and economic principles that influence the solid waste management system, Nationally and within Washington State;
2. Describe appropriate methods to minimize the impact to public and occupational health from solid waste related activities;
3. Analyze and communicate to a lay audience the importance of one of the components of an integrated solid waste handling system – including source reduction, recycling and reuse, composting, or landfilling and combustion; and
4. Analyze at least one environmental health topic for its impact on health and propose solutions based on what is known about the challenges/barriers.

Course Requirements

1. **Participation/Individual Assignments:** Students are expected to come to class having read and prepared for the day. Questions and comments on the subject matter are encouraged. In addition to participating in group discussions, throughout the quarter several self-assessment / module assessment activities will be used to



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supplement the student's self-awareness on a particular topic OR to assess comprehension at the end of a class/field trip. These assignments will be listed on the canvas website in each applicable class/module, as well as introduced during class (~100 pts).

Field Trips: Four class-time field trips have been scheduled to visit various solid waste handling facilities. Attendance and completion of worksheets at each will be factored into your final grade (60pts). For those unable to attend any or all of the field trips due to scheduling conflicts, special assignments will be available for complete credit upon the student's request. **Dress attire for field trips: jeans, jacket and substantial shoes (i.e. hiking boots).**

2. **Individual Project:** Each student will choose and analyze a particular solid waste/public health-related topic to explore in-depth. In addition to a written report (~10 pages, double spaced, 12 pt. font), students will prepare and present (~5 min.) a "poster" to the class on **Friday, December 9, 2016**. The individual project should:
 - a) Be based on information gathered by the student from: the periodic literature; government, NGO and other websites; and, the popular press. A visit to a federal, state or local government agency (or attendance of a city or county council meeting, a regional planning council meeting, or a public hearing), dealing with your environmental health program or issue would also be helpful and is encouraged, but is not required.
 - b) Present the following content:
 - Define the Problem: - What is the problem? - Why is it a problem, i.e. what are the health consequences? Who are the health consequences affecting?
 - Describe the underlying scientific evidence or theories.
 - Describe the Environmental Public Health Issue(s)
 - Identify the "stakeholders": - Responsible government agency or agencies; Industry; User (consumers) groups
 - Discuss the political and legal ramifications
 - Student's conclusions and recommendations
 - c) Consist of a "poster" presentation and accompanying written report.

The "poster" will be presented to the class during the last week of the quarter. In order to reduce waste, conserve resources and save the students money, the "poster" presentation will consist of a single PowerPoint slide submitted electronically to the instructor by **Noon on Thursday, December 8th** and include the following:

 - The project title;



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- The names of the student;
- The date;
- A statement of the problem or issue being investigated;
- A discussion of the legal, political and social issues affecting the problem;
- Identification of the major government agencies, private sector and non-governmental organizations or citizens groups involved; and,
- The results found and conclusions drawn by the student.

A PowerPoint template will be available on the canvas website for use in constructing a "poster".

The written report should include the above noted information, as well as information on any field visits, additional content and/or or discussion, and provide appropriate in-text citations as well as a complete reference section or bibliography. Any academic citation style is fine.

Individual project timeline/grades (100 pts):

- Paper topic submitted Oct. 7, 2016 in class
- News article summary related to your topic due October 14, 2016 (5 pts)
- Paper outline due October 21, 2016 (5 pts)
- Rough Draft of paper due for peer review on November 18, 2016
- Peer review of another student's paper due back before Thanksgiving break (electronically sent to the student with the instructor cc'd - 10 pts)
- Final paper due (~10 pages, double spaced, 12 pt font - 40 pts)
- Poster to instructor by noon on December 8, 2016
- Presentation of posters on December 9, 2016 (40 pts)

3. **Group Project:** During the first week of the course, the class will be divided into 3 groups, assigned by the instructor, which will analyze the need for either source reduction, recycling, or food waste recycling. Each group will be responsible for preparing a YouTube communicating, to a lay audience, the importance of their topic with respect to public health. A facts-based PowerPoint will be presented to the entire class on **Friday, October 28, 2016** for feedback on preparation for YouTube. The course project should:

- Be based on information gathered by the group from: the periodic literature; government, NGO and other websites; and, the popular press.
- Present the group's topic-related facts, conclusions and recommendations to a lay audience.



- Consist of a YouTube that is approximately 2-3 minutes in length, tasteful and obeys all copyright laws. The YouTubes will be “debuted” during class on Friday, December 9, 2016.

Group Project Timeline/grades (100pts)

- Recycled products/Reduction Facts Presentation October 28th (50 pts)
- YouTube Launch on December 2nd (50 pts)

Note: A single grade will be assigned to each group. However, the grade for each member of the group will be adjusted based on a peer evaluation performed by each member of the group. *It is critically important to your grade that everyone (including yourself) complete the peer evaluation form -- failure to do so could negatively affect your grade in the course as your final grade for the project will be adjusted according to the grades submitted by your peers.* A major purpose of the group project is for each member of the class to gain experience working together as a group to analyze a current issue or problem. This is a skill, which has become increasingly important in both private and public agencies and organizations.

Course Policies

1. **Academic Integrity** (<http://sph.washington.edu/students/academicintegrity/>)

Students at the University of Washington (UW) are expected to maintain the highest standards of academic conduct, professional honesty, and personal integrity.

The UW School of Public Health (SPH) is committed to upholding standards of academic integrity consistent with the academic and professional communities of which it is a part. Plagiarism, cheating, and other misconduct are serious violations of the University of Washington Student Conduct Code (WAC 478-120). We expect you to know and follow the university’s policies on cheating and plagiarism, and the SPH Academic Integrity Policy. Any suspected cases of academic misconduct will be handled according to University of Washington regulations. For more information, see the University of Washington Community Standards and Student Conduct website.

Notice: The University has a license agreement with VeriCite, an educational tool that helps prevent or identify plagiarism from Internet resources. Your instructor may use the service in this class by requiring that assignments are submitted electronically to be checked by VeriCite. The VeriCite Report will indicate the amount of original text in your work and whether all material that you quoted, paraphrased, summarized, or used from another source is appropriately referenced.

2. **Access and Accommodation** (<http://depts.washington.edu/uwdrs/faculty-resources/syllabus-statement/>): Your experience in this class is important to me. If you have already established accommodations with Disability Resources for Students



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(DRS), please communicate your approved accommodations to me at your earliest convenience so we can discuss your needs in this course.

If you have not yet established services through DRS, but have a temporary health condition or permanent disability that requires accommodations (conditions include but not limited to; mental health, attention-related, learning, vision, hearing, physical or health impacts), you are welcome to contact DRS at 206-543-8924 or uwdrs@uw.edu or disability.uw.edu. DRS offers resources and coordinates reasonable accommodations for students with disabilities and/or temporary health conditions. Reasonable accommodations are established through an interactive process between you, your instructor(s) and DRS. It is the policy and practice of the University of Washington to create inclusive and accessible learning environments consistent with federal and state law.

3. **Written Assignments:** All written assignments must be typewritten and submitted electronically through Canvas. Your written assignments will be graded on the substance of your report and on the effectiveness of its organization and presentation. Individuals or Groups should see the instructor if they have questions about making their PowerPoint slides or YouTubes.
4. **Grading:** Your final grade will be the average of the individual assignments (100 pts), your group course project (100 pts), individual paper and poster (100 pts) + any extra credit points.

Websites: Most of the required and supplement readings can be found on the internet. Additional addresses (URLs) will be provided throughout the quarter. Websites of interest include:

EPA Office of Solid Waste

<https://www.epa.gov/learn-issues/learn-about-waste>

Washington State Department of Ecology – Solid Waste and Financial Assistance

<http://www.ecy.wa.gov/programs/swfa/index.html>

Washington State Bills and Laws

Bills - <http://apps.leg.wa.gov/billinfo/>

RCWs/WACs - <http://www1.leg.wa.gov/LawsAndAgencyRules/>

King County Solid Waste Division Services

<http://your.kingcounty.gov/solidwaste/index.asp>

Public Health Seattle/King County – Solid Waste

<http://www.kingcounty.gov/healthservices/health/ehs/garbage.aspx>

Seattle Public Utilities

<http://www.seattle.gov/util/MyServices/Garbage/index.htm>



Solid Waste Management
 Course Schedule - Tentative
 ENVH 445 – Fall Quarter, 2016
 Fridays – 1:30 p.m. to 4:20 p.m.

Lec. No.	Date	CLASS	Lecturer
1	Friday Sept. 30	<ul style="list-style-type: none"> • Introduction; • EH/Public Importance; • Integrated SW Management concepts; and • SW Management Team 	Tania Busch Isaksen, DEOHS
2	Friday Oct. 7	<ul style="list-style-type: none"> • Laws and Regulations; • SW Planning /SW Characterization; and • Source Reduction & Reuse 	Tania Busch Isaksen, DEOHS
3	Friday Oct. 14	<ul style="list-style-type: none"> • Collection and Transfer; and • Recycling and resource recovery 	Tania Busch Isaksen, DEOHS
4	Friday Oct. 21	Field Study - <ul style="list-style-type: none"> • City of Seattle Transfer Station • Recycling product & S.R./reuse research time 	
5	Friday Oct. 28	<ul style="list-style-type: none"> • Recycling product & S.R./reuse Presentations & group time	Class groups
6	Friday Nov. 4	Field Study - <ul style="list-style-type: none"> • Cedar Grove Composting http://www.cedar-grove.com/about/technology/default.htm 	
	Nov. 11	No Class - Veterans day	
7	Friday Nov. 18	Field Study - <ul style="list-style-type: none"> • Cedar Hills Landfill http://www.metrokc.gov/dnrp/swd/facilities/cedarhills.asp 	
	Nov. 25	No Class - Thanksgiving	
8	Friday Dec. 2	Field Study - <ul style="list-style-type: none"> • Bullitt Center http://www.bullittcenter.org/ 	
9	Friday Dec. 9	Student Term Paper Presentations	
F	Monday Dec. 12	Final's time slot - 6:30-8:30 pm	



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Research Paper – Topics List

ENVH 445 – SOLID WASTE MANAGEMENT

Fall Quarter – 2016

I. Purpose

The purpose of this paper is to provide a forum for an in-depth examination of a solid waste issue of the student's choice.

II. Suggested Paper Topics

Construction Recycling “Green Building Programs”/Sustainable building

Composting

‘Take it back’ electronic recycling programs

E-waste – non-recycling impacts

Gas to Energy projects

Recycled tire products (crumb rubber)

Community Litter Clean-up Programs

Bio-solids application

Biodiesel production/use

Recycled Earth Products

Disaster-related SW Disposal Issues (e.g. 9-11 World Trade Center site / Asia Tsunami)

War time SW disposal issues

Food waste recycling

Incandescent vs. compact florescent light bulbs

OR

Make a proposal!