

EHS 100: Introduction to Environmental Health Sciences

UCLA Fielding School of Public Health

<http://ccle.ucla.edu/course/view/17F-ENVHLT100-1>

Syllabus – Fall 2017 – Last Updated September 19, 2017

please note that this syllabus is subject to change – please check course website for updates

Course information

Time: Tues & Thurs. 1 pm – 2:50 pm

Location: 43-105 CHS

Instructor:

Hilary Godwin, PhD
Professor, Environmental Health
Sciences

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office phone: 310-794-1238

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office hours: Tuesdays and Thursdays
from 3-4 pm in 16-035 CHS

To make an appointment to meet with
Dr. Godwin at a different time, please go
to <https://calendly.com/hgodwin>
or contact fsphucla@gmail.com

Teaching Assistants:

Jasneet Bains

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office hours & location: Thursdays from
11 am – 1 pm in EHS Student Lounge
(56-081 CHS)

Joyce Thung

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cell: (909) 358-7508

office hours & location: Tuesdays from
11 am – 1 pm in EHS Student Lounge
(56-081 CHS)

Course Overview

In this class, you will obtain an introduction to current areas of research in, applications of, and methodologies used in the field of Environmental Health Sciences.

Texts & Individual Response Devices

Required text:

Essentials of Environmental Health (either paperback or electronic)

by Robert H., Ph.D. Friis

Publisher: Jones & Bartlett Publishers; 2nd edition (2012)

ISBN-10: 9781284026337

Required Individual Response Devices:

Students are **required** to bring their clickers starting the first day of class in Week 1. You can use the iClicker+, iClicker or iClicker2 for participation. The web-based app (REEF Polling by i>clicker) can also be used if you have a compatible device and a sufficient WIFI connection. For iPhone and iPad users, search for REEF Polling in the Apple app store. For Android and laptop users, go to reef-education.com on your web

browser and sign in. After you purchase a clicker OR the app then you need to register your iClicker ID on the CCLE course website before the start of class. There is a link on the right panel of the course webpage for iClicker registration. We will show you where to register on the first day of class if you cannot find it on your own, or are not clear about what you need to do.

Recommended text:

A Community Guide to Environmental Health
by Jeff Conant and Pam Fadem
Publisher: Hesperian Health Guides (2008, 2012)
ISBN-10: 9780942364569
Free download available at:

http://en.hesperian.org/hhg/A_Community_Guide_to_Environmental_Health

Course Website

All homework assignments are posted on the course website which uses the Moodle platform (<http://ccle.ucla.edu/course/view/17F-ENVHLT100-1>). In addition, copies of the lecture (Powerpoint presentations) and any case studies/handouts will be posted on the course website AFTER each class. You should also check to make sure that you are able to access Turnitin.com for this course through my.ucla.edu as soon as possible. If you are unable to access either of these sites, please contact the instructor (hgodwin@ucla.edu).

Students are highly encouraged to post questions to the course website discussion forum. This will allow your classmates to benefit from your questions and the responses from the TAs and Professors.

Recordings

Some (if not all) of the sessions of EHS 100 will be recorded during the quarter, which means that your voice and/or visuals of you may be captured during course recordings. These recordings will be made available for online viewing to students in the class afterwards. Recordings are a complement to attending class in person and are not intended as a replacement for active participation and engagement during class. Some of the benefits of having access to lectures online include allowing you to review material before quizzes and to go over concepts you would like to reinforce after class on your own time, or to review areas you want more clarification on. We will keep you posted regarding how to access the recordings online, but they will most likely be made available via our course website: <http://ccle.ucla.edu/course/view/17F-ENVHLT100-1>

Course Structure

The class meets from 1-2:50 Tuesdays and Thursdays. Please read all required readings prior to coming to each class. Reading Assignments are listed in the tentative course schedule found at the end of this syllabus; any updates will be posted on the course website (<http://ccle.ucla.edu/course/view/17S-ENVHLT100-1>).

Course grading

There are five primary sources of evaluation for this class:

(1)	Homework Assignments (5)	20% of total grade
(2)	Class participation (based on individual response units)	20%
(3)	Quizzes (Best 2 out of 3)	20%
(4)	Group Presentations	20%
(5)	Final Written Report	20%

Homework Assignments

There will be 5 homework assignments. (See course website for assignment details.) You must submit your assignments electronically via the course website (<http://ccle.ucla.edu/course/view/17S-ENVHLT100-1>). Do NOT submit your assignments via email. All assignments must be submitted electronically prior to the beginning of class on Tuesday of the week that they are due. A 10% penalty (of the total possible points) will be deducted from late assignments for every day or partial day that the assignment is late. Late assignments will not be accepted after 3 days. All homework must be your own individual work (see **Academic Integrity**, below) and may NOT be completed in groups.

Class Participation

For each topic covered in the course, there is a related case study, which you will work on in class in your assigned groups. Class participation points are based on your individual active participation on answering questions in class (usually related to the case studies) – you do not need to get the “correct” answer to get credit for participating on a given item, but you do need to “click in”/participate using your individual response unit (either iClicker or REEF) on at least one of the response questions on each day in order to receive credit for participation that day. You will be given two “free” days of participation points. This should account for any technical difficulties, absences, or forgetting your clicker. Each student is responsible for both bringing their response unit to class each day and making sure that it is working and appropriately registered.

Quizzes

There will be 3 quizzes given during the quarter, which cover material covered in your textbook. (See the Learning Objectives at the beginning of chapters 1-8 of *Essentials of Environmental Health*, by Robert H. Friis for material that will be covered on the quizzes). Quizzes are individual work and are closed book/closed notes. Your grade for this portion of the class will be based on your best 2 out of 3 quiz scores. If you are unable to attend class on one of the dates that a quiz is being held, that will count as your quiz grade that is dropped.

Group Presentation

Group presentations are designed to demonstrate your ability to work as a team and explore a case study on how a particular community is impacted by and has coped with an environmental stressor. Groups are assigned by the instructor. We will talk more about the goals of and tips for working in groups in class on Thursday, October 5th. Your group will prepare a “Group Resume” and a “Group Contract”; you will need to submit these online before the beginning of class on **Thursday, October 26th**. Please see the “Assignments” tab of the course website for more details.

The area in which your group should choose their case study depends on the day on which your group is assigned to present. (For instance, if your group is assigned to present on Thursday, November 2nd, then your group should make a presentation about a case study on a community that was or is affected by poor water quality and how that community has responded or could build resiliency to these impacts.) (See “Assignments” tab on the course website for assignment details, including examples of case studies that you may wish to examine.) **PLEASE NOTE THAT ALL STUDENTS ARE EXPECTED TO ATTEND ALL GROUP PRESENTATIONS AND TO CLICK IN ON ANY QUESTIONS POSED BY THE GROUPS THAT ARE PRESENTING.**

In addition to the groups assigned to present on a particular day, there will be ~four groups assigned to review presentations on a particular day; members of the “reviewing groups” will be responsible for completing written evaluations for each of the groups that presents on the day that they are assigned as reviewers and turning in their written evaluations at the end of that class.

The grade for this portion of the course will be based on all of the following:

- Submission/completion of “Group Resume” and “Group Contract” (must be submitted online via the course website by **Thursday, October 26th**)
- Instructor and TA evaluations of group presentation
- Submission/completion of your written evaluations of the groups that you are assigned to review (due at the end of class on the date you are assigned to do reviews).
- Submission/completion of your peer-evaluations and self-evaluation form for group work.
- Peer evaluations of your contributions to group work from your other group members.

Final Written Report – Environmental Health Assessment

The Final Written Report is an Environmental Health Assessment for a community or site of your choice. (See course website for assignment details.) The Final Written Report builds upon Homework Assignments 2-5 and, like the Homework Assignments, must be written individually. All written reports must be submitted electronically to both Turnitin.com (see link from our course in my.ucla.edu or the block at the right side of the course website) AND the course website (<http://ccle.ucla.edu/course/view/17F-ENVHLT100-1>) prior to the beginning of class on Thursday, December 7th, regardless of the day on which your group is presenting. A 10% penalty (of the total possible points)

will be deducted from late assignments for every day or partial day that the assignment is late. Late assignments will not be accepted after 3 days.

Students Requiring Accommodations

Students needing academic accommodations based on a disability should contact the Center for Accessible Education (CAE) at (310) 825-1501 or in person at Murphy Hall A255. When possible, students should contact the CAE within the first two weeks of the term as reasonable notice is needed to coordinate accommodations. For more information visit www.cae.ucla.edu.

Academic Integrity

All submitted work **MUST BE YOUR OWN**. Although you are encouraged to work on your final project in groups and may study in groups, all work submitted for a grade (Homework Assignments and Final Report) must be **IN YOUR OWN WORDS AND PROPERLY CITED** where appropriate. In addition, all examinations must be performed individually and are closed book. You are expected to read and follow the UCLA Student Conduct Code (<http://www.deanofstudents.ucla.edu/conduct.html>) and the guidelines from the Registrar's office on avoiding plagiarism (see <http://www.registrar.ucla.edu/soc/notices.htm#Anchor-Plagiarism-6296> and also <http://www.library.ucla.edu/b Bruinsuccess/>). If you are not sure whether a particular action is in violation of UCLA's standards of academic integrity or constitutes plagiarism, please contact the instructor and error on the side of caution. Ignorance of the University's policies is not a legitimate excuse for violating them. **ALL VIOLATIONS OF THESE POLICIES WILL BE REFERRED IMMEDIATELY TO THE DEAN OF STUDENTS FOR REVIEW AND DISCIPLINARY ACTION.**

Learning Objectives and MPH Foundational Knowledge and Competencies

Upon completion of this course, you should be able to demonstrate the skills listed as "Course Learning Objectives" below. These learning objectives were selected to help you build foundational knowledge and competencies required for the MPH program. To find out more information about goals for foundational knowledge and competencies for MPH students, please <https://ceph.org/assets/2016.Criteria.pdf>.

COURSE LEARNING OBJECTIVES	HOW ASSESSED
1. Describe the ways that specific environmental stressors can impact the health of communities and populations.	Quizzes Group Presentation Homework #3 Final Written Report
2. Identify which environmental problems are most likely to have a significant impact on the health of a specific community or population, based on input from stakeholders and information from the literature.	Group Presentation Homework #4 Final Written Report
3. Identify appropriate approaches, metrics and data sources to determine how severely a particular environmental issue impacts the health of a particular community or population.	Group Presentation Homeworks #3 & 4 Final Written Report
4. Formulate a plan to identify sources of environmental hazards in collaboration with the affected community.	Case Studies Group Presentation Homeworks and Final Written Report

<i>COURSE LEARNING OBJECTIVES</i>	<i>HOW ASSESSED</i>
5. Formulate a plan to mitigate, reduce, or control sources of environmental hazards in collaboration with the affected community.	Group Presentation Homework #5 Final Written Report
6. Accurately and effectively communicate environmental health risks to targeted stakeholders and explain why/whether some populations are at greater risk than others for specific agents.	Group Presentation Final Written Report
7. Identify individual or societal factors that contribute to the extent to which the health of a specific population is impacted by a particular environmental stressor and/or needs to be taken into account when designing an intervention strategy.	Group Presentation Homeworks Final Written Report
8. Describe an example of how regulations and/or inspections have been used to prevent environmental health problems; describe who has the authority to impose these regulations for a particular region.	Group Presentation Homework #5 Final Written Report

<i>MPH FOUNDATIONAL KNOWLEDGE GOALS COVERED IN THIS COURSE</i>	<i>HOW ASSESSED</i>
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health.	Case Studies (Class Participation) Group Presentation Final Written Report
4. List major causes and trends of morbidity and mortality in the US.	Quizzes
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	Case Studies (Class Participation) Group Presentation Final Written Report
6. Explain the critical importance of evidence in advancing public health knowledge.	Case Studies (Class Participation) Group Presentation Final Written Report
7. Explain effects of environmental factors on a population's health.	Case Studies (Class Participation) Group Presentation Homework #3 Final Written Report
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities.	Case Studies (Class Participation) Group Presentation Final Written Report

MPH FOUNDATIONAL KNOWLEDGE GOALS COVERED IN THIS COURSE	HOW ASSESSED
11. Explain how globalization affects global burdens of disease.	Case Studies (Class Participation)
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health	Case Studies (Class Participation) Final Written Report

MPH FOUNDATIONAL COMPETENCIES COVERED IN THIS COURSE	HOW ASSESSED
1. Apply epidemiological methods to the breadth of settings and situations in public health practice	Case Studies (Class Participation) Group Presentation
2. Select quantitative and qualitative data collection methods appropriate for a given public health context.	Quizzes Homework #3 Final Written Report
4. Interpret results of data analysis for public health research, policy or practice.	Case Studies (Class Participation) Group Presentation Homeworks # 3 & 4 Final Written Report
6. Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels.	Case Studies (Class Participation) Group Presentation Final Written Report
7. Assess population needs, assets, and capabilities that affect communities' health.	Case Studies (Class Participation) Group Presentation Homework #3 Final Written Report
8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs	Case Studies (Class Participation) Group Presentation Homework #5 Final Written Report
9. Design a population-based policy, program, project or intervention.	Case Studies (Class Participation) Group Presentation Homework #5 Final Written Report
13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes.	Case Studies (Class Participation) Group Presentation Homework #3 Final Written Report
14. Advocate for political, social or economic policies and programs that will improve health in diverse populations.	Case Studies (Class Participation) Group Presentation Final Written Report

MPH FOUNDATIONAL COMPETENCIES COVERED IN THIS COURSE	HOW ASSESSED
16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making.	Case Studies (Class Participation) Group Presentation
18. Select communication strategies for different audiences and sectors.	Case Studies (Class Participation) Group Presentation Final Written Report
19. Communicate audience-appropriate public health content, both in writing and through oral presentation.	Case Studies (Class Participation) Group Presentation Final Written Report
20. Describe the importance of cultural competence in communicating public health content.	Case Studies (Class Participation) Group Presentation
21. Perform effectively on interprofessional teams.	Case Studies (Class Participation) Group Presentation
22. Apply systems thinking tools to a public health issue.	Case Studies (Class Participation) Group Presentation Final Written Report

**EHS 100 Spring 2017
Tentative Course Schedule**

please note that this syllabus is subject to change – please check course website for updates

Class meets 1-2:50 am Tues, Thurs.

Lectures are in 43-105 CHS

Date	Lecture Topic/Case Study	Required Reading <i>(Read before class)</i>	Recommended Reading	Homework Due <i>(Must be submitted electronically before the beginning of class on day indicated)</i>
Thurs., Sept. 28	Introduction to Environmental Health Sciences; Overview of Course Format and Learning Objectives Case Study: Impacts of Natural Disasters on the Health of Communities	Friis: Chapter 1	Conant and Fadem: Appendix A	
Tues., Oct. 3	Environmental Epidemiology Case Study: Epidemiology as a Tool for Promoting Environmental Justice	Friis: Chapter 2	Conant and Fadem: Chapters 1, 2 and 4	
Thurs., Oct. 5	Environmental Toxicology (2 pm) Dr. Prelip will talk to the class about Group Work, followed by “Group Resume” activity	Friis: Chapter 3	Conant and Fadem: Chapters 16 & 20	
Tues., Oct. 10	Environmental Policy and Regulation Case Study: Climate Change and Health: A Comparison of Projected Impacts in Southern California and Sub Saharan Africa	Friis: Chapter 4	Conant and Fadem: Chapter 3, 9, 10, 11 and Appendix B	<i>Homework Assignment 1: Developing a Personal Emergency Plan</i>

Date	Lecture Topic/Case Study	Required Reading <i>(Read before class)</i>	Recommended Reading	Homework Due <i>(Must be submitted electronically before the beginning of class on day indicated)</i>
Tues., Oct. 17	Agents of Environmental Disease: Toxic Metals and Elements Case Study: Lead Poisoning in Rural Communities in Nigeria and Peru	Friis: Chapter 6	Conant and Fadem: Chapter 21	<i>Homework Assignment 2: Selection of Community/Site for Environmental Health Action Plan and Initial Survey of Site</i>
Thurs., Oct. 19	Agents of Environmental Disease: Pesticides and Other Organic Chemicals Case Study: Fighting to End Use of Methyl Iodide in California	Friis: Chapter 7	Conant and Fadem: Chapter 14	
Tues., Oct. 24	Agents of Environmental Disease: Ionizing and Nonionizing Radiation Case Study: Fukushima and the Future of Nuclear Power	Friis: Chapter 8	Conant and Fadem: Chapters 12 & 13	
Thurs., Oct. 26	Quiz #2 (Chapters 5-8 of Friis) and How to Give An Effective Oral Presentation Using Powerpoint			<i>Group Resumes and Team Contracts due Online</i>

Date	Lecture Topic/Case Study	Required Reading (Read before class)	Recommended Reading	Homework Due (Must be submitted electronically before the beginning of class on day indicated)
Tues., Oct. 31	Applications of Environmental Health: Water Quality Case Studies: Arsenic in Tube Wells in Bangladesh; Lead in Water in Flint	Friis: Chapter 9	Conant and Fadem: Chapters 5 & 9	<i>Homework Assignment 3: Listing Environmental Problems in Your Community and Collecting Data and Information</i>
Thurs Nov. 2	Group Presentations: Water Quality and Health of Communities		Conant and Fadem: Chapter 6	
Tues., Nov. 7	Applications of Environmental Health: Air Quality Case Study: Indoor Air Quality & Cookstove Interventions	Friis: Chapter 10;		
Thurs., Nov. 9	Group Presentations: Air Quality and Health of Communities		Conant and Fadem: Chapter 17 & 23	
Tues., Nov. 14	Applications of Environmental Health: Food Safety & Food Security Case Study: Agroforestry non-profits and interventions in Western and Central Africa	Friis: Chapter 11	Conant and Fadem: Chapters 8, 9 & 11	<i>Homework Assignment 4: Establishing Priorities for Environmental Action</i>
Thurs., Nov. 16	Group Presentations: Food Safety and Food Security		Conant and Fadem: Chapters 12, 13 & 15	

Date	Lecture Topic/Case Study	Required Reading <i>(Read before class)</i>	Recommended Reading	Homework Due <i>(Must be submitted electronically before the beginning of class on day indicated)</i>
Tues., Nov. 21	Quiz #3 (Review of Chapters 1-8 of Friis)			
Thurs., Nov. 23	<i>NO LECTURE – THANKSGIVING HOLIDAY</i>			
Tues. Nov. 28	Applications of Environmental Health: Solid and Liquid Wastes Case study: Different Challenges in Achieving Sustainable Development Goal 6 in Urban vs Rural Settings	Friis: Chapter 12		<i>Homework Assignment 5: Establishing Environmental Health Goals and Potential Strategies for Action</i>
Thurs. Nov. 30	Group Presentations: Waste and Health of Communities		Conant and Fadem: Chapters 7, 18 & 19	
Tues., Dec. 5th	Applications of Environmental Health: Occupational Health and Injuries Case Study: Work and Stress	Friis: Chapters 13 & 14		
Thurs., Dec. 7th	Group Presentations: Worker Health; Unintentional Injuries and Deaths and their Impacts on Health of Communities		Conant and Fadem: Chapters 21 & 22	<i>Final Written Reports Due</i>
<i>THERE IS NO FINAL EXAM FOR THIS COURSE</i>				