Water, Sanitation, and Hygiene in Global Health

CH-196 Fall 2018

Please let me know if any part of the syllabus is unclear or if it has mistakes. If you find a mistake (grammatical or otherwise), you will get 5 bonus points on the final score of your first quiz, but you need to be the first person to point it out. 😊

Instructor

Name: Karen C. Kosinski, MSPH, PhD
Office: 574 Boston Avenue, Suite 208
Phone: (617) 627 – 4812
Email: karen.kosinski@tufts.edu
Office Hours: Mondays, 10:30am – 12:00pm and by appointment

Course Description

This course covers the basics of water, sanitation, and hygiene (WASH) in the context of public health in low-income countries. With respect to water, we will cover drinking water quality and quantity, appropriate water sources, and water treatment options. With respect to sanitation, we will cover sanitation technologies (various types of latrines, sewers, and septic systems) including construction, use, behavior change, ethics, and appropriateness for all basic needs, such as menstruation. With respect to hygiene, we will cover hygiene in a low-income context. This includes essential hygiene practices (e.g. hand-washing and menstrual hygiene management) in rural, urban, and peri-urban settings and under conditions of both water abundance and water stress. Additional topics to be addressed throughout the course include demand creation, assessment of current practices, and behavior change techniques. The course will emphasize appropriate use of the peer-reviewed literature and critical-thinking skills.

Prerequisites

All students should complete an introductory course in global health (e.g. CH-56), as well as an introductory course in epidemiology (e.g. CEE/CH-154) prior to enrolling in CH-196. The course is intended for seniors who are Community Health majors, but juniors may also find the course accessible. Students should be comfortable discussing topics such as human waste (toilets, feces, urine, menstrual blood), infectious diseases (e.g. intestinal helminths), and other topics that some people might consider taboo or uncomfortable.
Readings

All readings for this course should be completed prior to attending the corresponding class, with the exception of the readings associated with the first class meeting. The required text for this course is the following:


If you choose to buy the 1st edition of the required textbook, please be aware that there may be differences between the editions; you are responsible for material in the second edition. Additional required readings will be posted on the course website or placed on reserve in Tisch library. The following is a recommended reference textbook. The full text of this book can be electronically accessed through Tisch library (i.e. you don’t need to walk to Tisch!).


Additional readings from the peer-reviewed literature will be assigned throughout the semester based on student interests and preexisting background knowledge.

Quizzes

Reading assignments are an important part of this course. Quizzes on assigned readings typically will be closed-book, closed-notes. The format is usually multiple-choice and true/false, but there are sometimes open-ended questions. Students who arrive late to class or miss class and thus miss a quiz will earn a 0 for the missed quiz. When possible, please email me before class if you have a medical excuse for missing class and are concerned about missing a quiz.

Class Participation

Class participation is expected for a senior seminar in the Department of Community Health. CH-196 is a discussion-oriented course, although there is a lecture component. Students are expected to critically engage with the material, to contribute to class discussions, and to listen attentively and respectfully to their classmates. Depending on your comfort level with speaking during class, you may want to choose a grading scheme accordingly (see different weights assigned to class participation). Students in the class who are the most critically engaged will earn a score in the A range. Students who are somewhat less engaged but still attentive will score in the B range. Students who miss class, who use technology inappropriately (e.g. phones, tablets, laptops), who don’t listen to their classmates, or who are unprepared will score in the C range or lower.
Grading

Grading Plans
The grading for this course is individualized and tailored to the needs of each student. Please choose one of the grading plans listed below by September 18th, 2018 at 5pm. Please email me (karen.kosinski@tufts.edu) with your choice. If I don’t hear from you, I will choose your grading plan. These plans cannot be changed after September 18th unless there are extenuating circumstances (see below).

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Questions about Specific Grades
You may have questions about a grade earned on a particular assignment. If questions arise, please wait until 24 hours have passed between receiving the grade and asking questions about it. If you do have questions about a grade, ask for clarification about the grade within two weeks of earning the grade. You must request the clarification in writing via email (NOT before or after class).

Questions about Overall Course Grade
Feel free to contact me about any concerns you have about your overall grade in CH-196. Do not feel as though you need to wait until your grades are consistently lower than you would like; email me for an appointment to discuss them as soon as you feel concerned. I am always happy to work with students to ensure that they achieve at the highest possible level.

Late Policy
Each day an assignment is late, 5% of the total possible score will be subtracted from the final grade. Late begins at 1 minute past the deadline. If you need extra time on the literature review or final paper and want to take the 5% per day penalty, this is often totally reasonable; there is no need to let me know in advance or to ask permission. However, I find that if a student takes 2 or more extra days, their final grade in the class very often suffers due to the 10+% off on one assignment. Although I don’t recommend it, it’s entirely your own choice.

In general, computer and printer problems and deadlines for other classes are not acceptable reasons for requesting a no-penalty deadline extension. Save your work regularly, including copying it to somewhere other than your computer. I recommend that you create a folder in Dropbox specifically for this class and that you complete all of your written assignments within
that folder. You can download Dropbox to your computer; no need to constantly log in online. That means that your work is always backed up when you’re on Wi-Fi, even if you drop your computer or spill coffee on it, or have some other disaster. Make sure that Dropbox is always synching.

Once during the semester, you may use a “24-hour extension freebee”. This means that you can submit any single assignment (e.g. taking a quiz, literature review, final paper, or moving your project meeting date pending schedule availability) up to 24 hours late with no penalty whatsoever. The caveat is that you must email me prior to the due date to tell me that you want to use your one freebee for the semester.

**Extra Credit**

Extra credit opportunities are not provided.

**Final Project – Proposed Solutions to a Real WASH Challenge**

You will be given a real-world scenario in which a community in a low-income tropical setting is faced with simultaneous water, sanitation, and hygiene challenges. You will be provided with data and background information about the community. You will be asked to propose a solution to the challenges faced by this community.

If you choose the grading plan with the “Meeting for Final Project” component, then towards the middle of the semester, you will be asked to schedule a 30-minute meeting with me about your project. If this applies to you, send me an email with about 5 time slots that are open for you (see syllabus for relevant weeks) and request a meeting. At the meeting, you will need to show that you have (a) outlined all of the major points to be made in your final project and (b) read the relevant peer-reviewed literature you plan to use. During the meeting, you are also encouraged to ask questions and receive further direction from me.

You will be expected to complete the literature review before submitting the final paper. The scholarly literature should be used to inform your final proposed solution(s). If you are not comfortable with identifying, locating, reading, and summarizing the scholarly literature, please make an appointment to sit down and talk with the reference librarians at Tisch (they are wonderful!) or with me. I am happy to provide additional guidance on an individual basis. You will be asked to present your final project on the last day of class (ungraded).

**Writing Requirements**

**General Help with Writing**

In this course, there are two long writing assignments. In general, the ability to communicate clearly and concisely in written form is an acquired skill. I hope that this course will be useful to you in terms of developing this skill. If you are not a strong writer and are concerned that you will not do well on the writing assignments, make an appointment to sit down with me at the beginning of the term to discuss your concerns regarding the writing assignments.
I will discuss the literature review with you in person only if you choose the grading scheme with the graded “Meeting for Final Project”. Unfortunately, I’m not able to read or discuss drafts via email, due to time constraints. Please email me for an appointment to talk through your draft together (see course schedule for good times to do this).

Proofreading for spelling and grammar is essential; it is your responsibility to ensure that your spelling and grammar are perfect. Please pay careful attention to the formatting requirements for each assignment. Assignments that are not formatted correctly may not be accepted or you may lose points. I will not proofread for spelling and grammar unless you have a compelling reason for me to do so.

Writing when English isn’t Your First Language
While most classes in the Department of Community Health are conducted in English, we serve many bi-, tri-, and multilingual students, which positively contributes to the diversity at Tufts. If you are proficient in languages other than English, this is a strength and will serve you well in the health fields. I understand that the challenge of writing in English when it’s not your first language can be enormous at times. Please let me know if you would like help from me with your writing in this course. I will also take into account your skills in languages other than English when grading your written assignments.

Plagiarism
Plagiarism is using someone else’s words, ideas, or phrases in your work and representing them as your own or not properly attributing the work. Please be aware that copying a phrase or sentence and listing a citation at the end without using quotation marks is plagiarism. Plagiarism is more fully discussed on the student life policies website. For this course, you will need to upload your papers to www.turnitin.com. If you plagiarize, you may get a zero on the assignment and you will be reported to the appropriate dean. Do not plagiarize. If you use a source, cite it. This applies to all information either directly quoted or paraphrased. If you copy words directly, they must be in quotation marks (“ ”). If you’re not sure whether you’re citing properly or copying directly, email me and ask about the specific text in question, or schedule a meeting and we’ll go over it together.

Miscellaneous

Class Notes
I will post the majority of the course notes on Trunk, but there is no guarantee that a given set of notes will be posted. You are generally responsible for taking your own notes during class unless you have a compelling reason for someone else to do so (email me). If you miss more than one class, your class participation will likely suffer substantially. Keep in mind that even excused absences from class (ex. family events, traveling to visit med schools, an internship obligation, field trip for another class, etc.) will lower your final score on class participation.

Students with Disabilities
At Tufts, we value the diversity of our students, staff, and faculty, recognizing the important contribution each student makes to our unique community. Tufts is committed to providing equal
access and support to all qualified students through the provision of reasonable accommodations so that each student may fully participate in the Tufts experience. If you have a disability that requires reasonable accommodations, please contact the Student Accessibility Services office at accessibility@tufts.edu or 617-627-4539 to make an appointment with an SAS representative to determine appropriate accommodations. Please be aware that accommodations cannot be enacted retroactively, making timeliness critical.

**Extenuating Circumstances**

Extenuating circumstances arise and may take a number of different forms; they ARE grounds for special consideration for class participation, quizzes, and projects. Examples of extenuating circumstances are the following: a death in the immediate family; death of a close friend/loved one; illness that is documented by a health care practitioner; ongoing health concerns that will cause a student to miss multiple class sessions (e.g. cancer treatment, sickle-cell anemia treatment, etc.); and food or housing insecurity. I will typically ask you to check in with your alpha dean if you are affected by one of these emergencies and that person can help you navigate your options, as well as campus support services. Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, is urged to contact the Dean of Student Affairs Office for support. Furthermore, please notify me if you are comfortable doing so.

**Technology Policies**

In *most* courses that I teach, I ask that students not use laptops, tablets, phones, or other types of technology during class periods. These tend to be distracting to other students and do not create a positive learning environment. However, for my senior seminars, I always *start* the semester by allowing laptops and tablets for note-taking and for looking up visual images of things we are discussing during class (e.g. raccoon dogs, pork tapeworms, etc.). Do not feel that you must bring a technological device, but you may if you wish. If they become distracting or if you are using them for things that are not class-related, then I will change this policy.

**Tufts Distribution Requirements Met**

1. World Civilizations (Tufts Distribution Credit)
2. Natural Sciences (Tufts Distribution Credit)

**Community Health Learning Objectives addressed by CH-196**

1. “Students can understand how multiple disciplines bring unique perspectives to cross-cutting questions of health and societies.
   a. “Integration of learning disciplinary perspectives
   b. “Understanding cultural differences through use of practice and research
2. “Students can explain and assess social and behavioral interventions to improve the health of populations.
   a. “Oral and written communication skills
   b. “Intercultural skills and abilities
3. “Students can explain the impact of infectious disease on populations
   a. “Oral and communication skills
4. “Students can identify the role that public health plays in improving global health
   a. “Ethical reasoning”
Citations for Reading Materials


MURCOTT, S. (2006) Implementation, critical factors and challenges to scale-up of household drinking water treatment and safe storage systems. Hygiene Improvement Project (HIP) Electronic Conference. USAID / HIP.


### Class Schedule (Subject to Change)


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<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Day</th>
<th>Topics</th>
<th>Theme</th>
<th>Written Assignments</th>
<th>Readings</th>
<th>Reference Materials</th>
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<tr>
<td>1</td>
<td>9/4</td>
<td>Tue</td>
<td>Historic importance of WASH and health</td>
<td>WASH</td>
<td>C &amp; F Chapter 1</td>
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<tr>
<td>2</td>
<td>9/11</td>
<td>Tue</td>
<td>Infectious and non-infectious agents of disease</td>
<td>Water</td>
<td>C &amp; F Chapter 3</td>
<td>MFMPB Chapter 18</td>
<td>Foster 2013</td>
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<td>Drinking water quality</td>
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<td>Urban water sources and water treatment</td>
<td>Water</td>
<td>C &amp; F Chapter 6</td>
<td>MFMPB Chapter 9</td>
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<td>Rural water provision systems</td>
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<td>Introduction to water treatment</td>
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<td>9/25</td>
<td>Tue</td>
<td><strong><strong><strong><strong><strong>Book Club</strong></strong></strong></strong></strong></td>
<td>Sanitation</td>
<td>The Big Necessity</td>
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<td>5</td>
<td>10/2</td>
<td>Tue</td>
<td>Hygiene practices in public vs. domestic domains</td>
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<td>C &amp; F Chapter 9</td>
<td>Skolnik 2011</td>
<td>Curtis et al. 2000</td>
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<td>Domestic hygiene and stool disposal</td>
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<td>10/9</td>
<td>Tue</td>
<td>NO CLASS - TUFTS MONDAY SCHEDULE</td>
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<td>10/16</td>
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<td>Assessing the context of hygiene practices in the field</td>
<td>Hygiene</td>
<td>C &amp; F Chapter 7</td>
<td>Almedom et al. 1997 Chapter 5</td>
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<td>Investigating hygiene practices in the field</td>
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<td>Vindigni et al. 2011</td>
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<td>Handwashing behavior and sustained behavior change</td>
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<td>Types of sanitation facilities</td>
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<td>Dar et al. 2011</td>
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<td>Construction of sanitation facilities: engineering materials</td>
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<td>Construction of sanitation facilities: construction techniques</td>
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<td>Planning a sanitation program</td>
<td>Sanitation</td>
<td>Literature Review Due by 11:59pm</td>
<td>C &amp; F Chapter 9</td>
<td>Waterkeyn &amp; Cairncross 2005</td>
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<td>Tue</td>
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<td>C &amp; F Chapter 12</td>
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<td>MFMPB Chapter 24</td>
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<tr>
<td>13</td>
<td>12/4</td>
<td>Tue</td>
<td>Student presentations</td>
<td>WASH</td>
<td>Final Paper Due by 11:59pm</td>
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