

DRAFT Syllabus - Fall 2018 - (updated Sept. 24, 2018, subject to change)

Course information

Time: Mondays, Wednesdays, and Fridays, 3-4:50 PM  
Location: 61-269 CHS  
Cap on Attendance: 35 total (5 in C185B, 30 in C200B)  
Units: 6

Instructor:  
Brian Cole, MPH, DrPH  
Assistant Professor In-Residence, Env Health Sci  
Office phone: (310) 206-4253, Email: [blcole@ucla.edu](mailto:blcole@ucla.edu)  
Office Hours: By appointment in 5127 LSB

Required Text

Environmental Health: From Global to Local by Howard Frumkin, 3<sup>rd</sup> edition:  
ISBN-10: 1118984765 | ISBN-13: 978-1118984765 (available as a Kindle ebook, ASIN B01BN0QGU8)

Independent Reading Selection (*Homework Assignments #5 and #6*)

Each student is required to read a popular nonfiction book that addresses some aspect of Environmental Health Sciences, write a review of the book and give an oral presentation in class on the book. A list of choices will be sent out to students prior to the beginning of the quarter. Please note that only one student will be allowed to report on any given book, so **you MUST get your book choice approved in advance by the instructor**. You are encouraged to select your book early. Please send an email to [blcole@ucla.edu](mailto:blcole@ucla.edu) listing the title and author of your top four choices and ranked 1 (first choice) to 4 (last choice) as soon as possible. You may include books that are not listed below among your four alternatives, as long as the books are nonfiction and are related to Environmental Health Sciences (broadly defined). Please DO NOT choose a book that you have already read; the whole idea is for you to expand your horizons.

Course Description

Multidisciplinary aspects of environmental health sciences in context of public health for master's and doctoral students pursuing degrees in the Department of Environmental Health Sciences (C200B) and for IoES undergraduate majors who are pursuing a concentration in Environmental Health or Public Health Minors (C185B). EHS 200B is also a suitable substitute for EHS 100 for MPH students in other concentrations (Community Health Sciences, Health Policy and Management, Epidemiology or Biostatistics) who have a strong background in the sciences and would like a more in-depth exposure to the topic. Letter grading. Preparation required: one year each of undergraduate biology, calculus, chemistry, and physics.

Every day the front page of every newspaper in the world has an article that touches on environmental health. The threats can be global climate change, heat waves or floods, air and water pollution, oil spills or contamination from geologic fracturing, effects on vulnerable populations, radiation threats, shelter failures, and many more. Future environmental health and public health leaders must understand the vocabulary and systems issues related to these challenges and be able to analyze, develop course of action, communicate, follow direction, and eventually lead. The purpose of this course is to develop the content knowledge and thought processes to effectively assume these roles.

Course Website

All homework assignments are posted on the course website: <https://ccle.ucla.edu/course/view/18F-ENVHLTC200B1>  
If you are unable to access the course website, please contact Brian Cole ([blcole@ucla.edu](mailto:blcole@ucla.edu)).

Course Structure

The class meets six hours per week. In addition to lectures from the instructor, there will be numerous guest lectures, student presentations and several field trips to visit with working environmental health professionals. Active participation is essential to success in this course. Please read all required reading prior to coming to each class; be prepared for critical discussions of the topics being presented each day. 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. Homework Assignments must be submitted prior to the beginning of class via the course website on the date that they are due.

## Learning Objectives 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 competencies required for the MPH program (see <http://ph.ucla.edu/current-students/programmatic-competencies>).

| COURSE LEARNING OBJECTIVES   | HOW THESE LEARNING OBJECTIVES ALIGN WITH COMPETENCIES FOR SPECIFIC DEGREE PROGRAMS   |  |  |
|--|--|--|--|
|  | MPH Core Competencies<br>(for all MPH students)  | EHS MPH Discipline-Specific Competencies<br>(for MPH students in the EHS concentration)  | EHS MS Competencies  |
| 1. Accurately and effectively communicate environmental health risks to critical stakeholders individually and as part of a team.  | <p>C5. Identify potential sources of systematic error (bias) as well as random error.</p> <p>F5. Demonstrate effective written and oral skills for communicating with different audiences in the context of professional public health activities.</p> <p>F8. Engage in dialogue and learning from others to advance public health goals.</p> <p>F9. Demonstrate team building, negotiation, and conflict management skills.</p> <p>F10. Use collaborative methods for achieving organizational and community health goals.</p> <p>F11. Articulate how biological, chemical and physical agents affect human health.</p> | <p>I1.1 Describe major direct and indirect human health and safety effects of major environmental or occupational agents or conditions.</p> <p>I10.1 Organize information and data, prepare technical reports and give oral presentations on environmental contaminants and impacts.</p> <p>I10.2 Communicate effectively with diverse audiences</p> | <p>C2. Produce working tables, statistical summaries, and effective figures to summarize data.</p> <p>E1. Prepare presentation materials including outlines, posters, and Powerpoint presentations.</p> <p>E2. Deliver effective oral presentations individually and as part of a team.</p> <p>E3. Explain and interpret research findings for students, professionals, the public, and media.</p> |
| 2. Tailor written communications so that they are appropriate to the target audience.  | <p>C2. Identify key sources of data and use existing databases to provide background or supportive data to address research questions.</p> <p>F5. Demonstrate effective written and oral skills for communicating with different audiences in the context of professional public health activities.</p> <p>F11. Articulate how biological, chemical and physical agents affect human health.</p>   | <p>I10.2 Communicate effectively with diverse audiences</p>  | <p>C2. Produce working tables, statistical summaries, and effective figures to summarize data.</p> <p>E3. Explain and interpret research findings for students, professionals, the public, and media.</p>  |
| 3. Using specific examples in Environmental Health, describe the major barriers to implementing policies of prevention in the area of public health and critical strategies for overcoming these barriers. | <p>F14. Apply evidence-based principles and the scientific knowledge base to critical evaluation and decision-making in public health.</p>   |  | <p>B5. Be able to articulate interdisciplinary approaches to solving public health problems.</p>   |

| <b>COURSE LEARNING OBJECTIVES</b>  | <b>HOW THESE LEARNING OBJECTIVES ALIGN WITH COMPETENCIES FOR SPECIFIC DEGREE PROGRAMS</b>   |  |   |
|--|---|--|---|
|  | <b>MPH Core Competencies<br/>(for all MPH students)</b>   | <b>EHS MPH Discipline-Specific<br/>Competencies (for MPH students in<br/>the EHS concentration)</b>  | <b>EHS MS Competencies</b>  |
| 4. Describe the major threats to health in homes and the primary strategies currently used to combat these threats in the United States.   | C1. Describe the direct and indirect human, ecological and safety effects of major environmental and occupational agents.   | I1.1 Describe major direct and indirect human health and safety effects of major environmental or occupational agents or conditions.   | A1. Retrieve and organize literature; synthesize and critically evaluate scientific literature in environmental health, public health and other relevant fields.<br><br>A2. Use existing databases to provide background information or data to address research questions and draw appropriate inferences/estimates from environmental health data.  |
| 5. Describe a type of physical threat to human health and provide both a historical example of how this threat has impacted human health on a catastrophic scale and how this threat impacts the daily lives of some people today. | C1. Describe the direct and indirect human, ecological and safety effects of major environmental and occupational agents.<br><br>F11. Articulate how biological, chemical and physical agents affect human health.  | I1.1 Describe major direct and indirect human health and safety effects of major environmental or occupational agents or conditions.<br><br>I1. 4 Be able to construct and interpret models of environmental health pathways to develop solutions to environmental health problems and exposures.                                      |   |
| 6. Describe how Health Impact Assessment differs from traditional Risk Assessment. Provide an example of a situation where HIA would be more useful than traditional Risk Assessment.  | C2. Develop and assess appropriate data collection instruments (e.g., questionnaires, physical exam, lab assays, etc.) and evaluate the use of questionnaires and measurement instruments in collection of data to maintain internal validity<br><br>C4. Specify current environmental risk assessment methods.<br><br>C7. Develop an efficient design for collecting, recording, managing, and storing data. Adapt principles of data management and quality assurance to different study designs<br><br>F15. Differentiate between qualitative and quantitative evaluation methods in relation to their strengths, limitations, and appropriate uses, and emphases on reliability and validity. | I5.1 Use at least three of these assessment methods: quantitative risk assessment; burden of disease using disability-adjusted life years; spatial analysis and geographic information systems; health impact assessment; alternatives assessment.<br><br>I5.2 Identify areas of uncertainty in exposure and risk assessment processes | A1. Retrieve and organize literature; synthesize and critically evaluate scientific literature in environmental health, public health and other relevant fields.<br><br>A2. Use existing databases to provide background information or data to address research questions and draw appropriate inferences/estimates from environmental health data.<br><br>B2. Evaluate the scientific merit and feasibility of study designs.<br><br>B4. Identify potential sources of systematic error (bias) as well as random error.<br><br>D1. Make reasonable inferences from results of analysis of observational and analytic studies. |

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|   | <b>MPH Core Competencies<br/>(for all MPH students)</b>  | <b>EHS MPH Discipline-Specific<br/>Competencies (for MPH students in<br/>the EHS concentration)</b>  | <b>EHS MS Competencies</b>  |
| 7. Describe how both scientific data and community engagement are critical to implementing important environmental health policies. | C3. Identify an appropriate target population for investigating the research question.   |  | B2. Evaluate the scientific merit and feasibility of study designs.<br>B3. Identify an appropriate target population or organism for investigating the research question.<br>B4. Identify potential sources of systematic error (bias) as well as random error.<br>B5. Be able to articulate interdisciplinary approaches to solving public health problems<br>D1. Make reasonable inferences from results of analysis of observational and analytic studies. |
| 8. Describe an example of an occupational health problem and how a prevention approach could be used to address this problem.       | C1. Describe the direct and indirect human, ecological and safety effects of major environmental and occupational agents.<br>F11. Articulate how biological, chemical and physical agents affect human health. | I1.1 Describe major direct and indirect human health and safety effects of major environmental or occupational agents or conditions.<br>I1.2 Identify the most important disease burdens with major environmental or occupational risk factors and the environmental or occupational risk factors that produce the most disease burden in either the general population or in heavily affected subgroups.<br>I1.3 Identify significant gaps in the current knowledge base concerning health effects of environmental or occupational agents.<br>I3.1 Describe how humans are exposed to chemical, physical, and biological agents in the workplace and environment and how exposures are determined.<br>I3.2 Describe how exposures can be controlled through administrative procedures, personal protective equipment, various engineering technologies, and social interventions | A1. Retrieve and organize literature; synthesize and critically evaluate scientific literature in environmental health, public health and other relevant fields.<br>A2. Use existing databases to provide background information or data to address research questions and draw appropriate inferences/estimates from environmental health data.<br>B5. Be able to articulate interdisciplinary approaches to solving public health problems                  |

| <b>COURSE LEARNING OBJECTIVES</b>  | <b>HOW THESE LEARNING OBJECTIVES ALIGN WITH COMPETENCIES FOR SPECIFIC DEGREE PROGRAMS</b>   |   |  |
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|  | <b>MPH Core Competencies<br/>(for all MPH students)</b>   | <b>EHS MPH Discipline-Specific<br/>Competencies (for MPH students in<br/>the EHS concentration)</b>   | <b>EHS MS Competencies</b>   |
| 9. Describe the most pressing health problems associated with climate change faced by Southern Californians; provide examples of how resiliency towards these effects might be built.            | <p>C1. Describe the direct and indirect human, ecological and safety effects of major environmental and occupational agents.</p> <p>F11. Articulate how biological, chemical and physical agents affect human health.</p>   | <p>I1.1 Describe major direct and indirect human health and safety effects of major environmental or occupational agents or conditions.</p> <p>I9.1 Explain climate change and likely direct and indirect impacts on environment and health.</p> <p>I9.2 Define major approaches for climate change mitigation and adaptation in California and internationally.</p>  | <p>A1. Retrieve and organize literature; synthesize and critically evaluate scientific literature in environmental health, public health and other relevant fields.</p> <p>A2. Use existing databases to provide background information or data to address research questions and draw appropriate inferences/estimates from environmental health data.</p>  |
| 10. 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 in our region. | <p>E2. Describe the legal and ethical bases for public health and health services.</p> <p>E4. Discuss the policy process for improving the health status of populations.</p> <p>F14. Apply evidence-based principles and the scientific knowledge base to critical evaluation and decision-making in public health.</p> | <p>I2.2 Describe how chemical agents are tested for acute, sub-chronic and chronic health effects, including reproductive, developmental and carcinogenic effects, and use of "omics" methods, and interpret toxicological data in terms of relevance to human health.</p> <p>I6.1 Describe major types of institutions responsible for occupational or environmental health policy</p> <p>I6.2 Identify major state, federal, international regulatory programs or authorities for occupational or environmental health.</p> <p>I6.3 Analyze policy contexts and develop responsive policy proposals reflecting environmental health science</p> | <p>A1. Retrieve and organize literature; synthesize and critically evaluate scientific literature in environmental health, public health and other relevant fields.</p> <p>A2. Use existing databases to provide background information or data to address research questions and draw appropriate inferences/estimates from environmental health data.</p> <p>B5. Be able to articulate interdisciplinary approaches to solving public health problems.</p> |

## Course grading

1. Homework Assignments (7 for students registered for 200B; choice of 5 for students registered for 185B) 32.5%
2. Midterm Exam 30%
3. Final Exam 30%
4. Participation 7.5%

## Homework

Homework assignments are designed to provide opportunities for students to explore environmental health issues in more depth. Instructions for these assignments are posted on the course website under the week that they are due. Critical guidance on homework assignments and writing expectations will be provided in class prior to the assignment due date, so it is important that you attend class regularly. **Homework assignments are generally due on Fridays and must be submitted via the course website (<https://ccle.ucla.edu/course/view/18F-ENVHLC200B-1>) prior to the beginning of class on the day that they are due.**

Many of the homework assignments involve writing. If you feel that you need individual writing assistance, we encourage you to see <http://gsrc.ucla.edu/gwc/> (UCLA Graduate Writing Center) or [http://www.wp.ucla.edu/index.php?option=com\\_content&view=article&id=161&Itemid=113](http://www.wp.ucla.edu/index.php?option=com_content&view=article&id=161&Itemid=113) (UCLA Undergraduate Writing Center) for information about how to schedule a consultation. Please note that consultations must be scheduled in advance, so PLEASE PLAN AHEAD.

**Undergraduate students (enrolled in 185B) should only complete 5 of the 7 total homework assignments.**

Homework Assignments #4 - #7 are required for ALL students, but students taking 185B need to complete only one of Assignments 1 - 3 (i.e. a total of five assignments). There is no extra credit given for completing more than the five required assignments; we will simply count the grades from the first three assignments that you turned in.

**Graduate students (enrolled in 200B) must complete all 7 of the homework assignments.**

**Homework Assignments** (*see course website for details*) \* indicates assignment may be completed as a group project

1. **Environmental Noise Assessment** - 10 points [due Friday, October 12]  
Pairs of students will use phone app sound meters to assess environmental noise levels and will compare app performance or report on variation in noise levels in the environment.
- 2a. **Op-Ed (MPH students)** 10 points [due Friday, Oct. 19]  
Students will write a 500-800 word "Op Ed" essay that addresses a current local or state environmental health issue.
- 2b. **Research proposal prospectus (MS students)** 10 points [due Friday, Oct. 19]  
Students will write a 500-800 word research proposal prospectus for investigating exposures or health risks associate with an emerging environmental health problem.
3. **Worksite Health and Safety Powerpoint**- 10 points [due Friday, October 26]  
Working in small groups students will research and prepare a short Powerpoint presentation aimed at improving worksite health and safety practices.
4. **Literature Review Presentation** - 10 points [due Nov. 9]  
Working individually or in groups of 2-3 students, students will conduct a literature review and present their findings in class. Reviews will assess either a policy-relevant "upstream determinant of health" commonly addressed in health impact assessment OR an emerging or controversial environmental health issue.
5. **Literature Review Report** - 10 points [due Nov. 16]  
Students will submit a 2-4 page report summarizing their literature review findings.
6. **Book review report** - 10 points [due Dec. 3]  
Students will read a popular nonfiction book addressing an environmental health issues and write a review in a style that would be appropriate for publication in the New York Times Book Review.
7. **Book review presentation** - 5 points [presented in class either Nov. 26 or Dec. 3]

students enrolled in 185b  
may select 2a or 2b

## Initial Knowledge Assessment; Midterm and Final Exams

During the second hour of the first day of the course, you will be required to complete an “Initial Knowledge Assessment” that contains 8 short answer questions related to topics that will be covered during the course. The initial knowledge assessment does not count towards your grade. **PLEASE DO NOT TRY TO STUDY FOR THIS ASSESSMENT.** The Initial Knowledge Assessment is designed to provide the instructor with insights into the knowledge you have coming into the course so that we don’t repeat information that you already know and gauge the level of the course appropriately. This assessment will also help us to group you appropriately with others who have different skill sets when we have the communication and leadership activities on Fridays.

Part one of the midterm and the final will contain multiple choice/fill in the blank questions, which are designed to test your retention of the materials presented in the readings and lectures. The 25 multiple choice/fill in the blank questions on part one of the midterm will cover materials from the lectures and readings from the first 5 weeks of the quarter (9/28/18 through 10/31/18). The 25 multiple choice/fill in the blank/short answer questions on part one of final exam will cover materials from the lectures and readings from weeks 6-11 of the quarter (11/5/18 through 12/7/18).

Part two of the midterm and the final will contain short answer questions designed to test your knowledge gains as a result of taking the course. Part two of the midterm will be identical to the first four short answer questions on the Initial Knowledge Assessment; Part two of the final exam will be identical to questions 5-8 on the Initial Knowledge Assessment.

**ALL EXAMS ARE CLOSED BOOK/ONE 4X6-INCH NOTECARD WITH HAND-WRITTEN NOTES (BOTH SIDES) ALLOWED FOR THE MID-TERM AND FINAL EXAMS.**

## Class Participation

The class meets six hours per week and is in the format of an interactive seminar on Mondays and Wednesdays and Communication and Leadership Activities on Fridays. Active participation is essential to success in this course. **PLEASE MAKE SURE THAT YOU ARE IN CLASS ON TIME.** On Mondays and Wednesdays, we will assume that you have completed all required reading prior to coming to each class and use those readings as a starting point for in class discussions. **PLEASE MAKE SURE THAT YOU HAVE COMPLETED ALL REQUIRED READINGS PRIOR TO COMING TO CLASS.** Fridays are dedicated to hands-on Communication and Leadership Activities, which also require active participation of all students. **PLEASE COME TO CLASS READY TO LEARN AND BE ENGAGED.** Although you are allowed to use computers during class, we are relying on you to exercise restraint and not surf the web (or engage in other non-class activities online) during class.

Tentative Course Schedule (as of 9/24/18). Please note that the schedule is subject to change; please check the course website for updates and the final schedule.

| Day                          | Topic & Primary Instructor  | Reading Assignment<br>(Please read prior to the class on the day specified)  | Homework Assignment<br>(submit electronically via course website before class on due date) |
|------------------------------|---|--|--|
| Week 0<br>Friday<br>9/28/18  | <b>General Introduction to Course (Cole)</b> <ul style="list-style-type: none"> <li>- Overview of the course and subject area</li> <li>- Brief discussion of course organization issues</li> <li>- Syllabus, grading, introductions</li> </ul> <b>Initial Knowledge Assessment (7 short answer questions)</b> | Please be sure to purchase the text book from an online retailer prior to the beginning of the quarter   |  |
| Week 1<br>Monday<br>10/1/18  | <b>Radiation &amp; Health (Cole)</b>  | Frumkin, <i>Environmental Health</i> : Ch. 22 (3 <sup>rd</sup> ed) "Radiation"<br>Gephart, 2010  |  |
| Wednesday<br>10/3/18         | <b>Introduction to Toxicology and case study of mercury (Cole)</b>  | <i>Frumkin, Environmental Health</i> : Ch. 6 (3 <sup>rd</sup> ed.) "Toxicology"<br>Ekino et al, 2007   |  |
| Friday<br>10/5/18            | <b>Environmental Noise Exposure (Cole)</b>  | Basner M, Babisch W, Davis A, Brink M, Clark C et al. <i>Auditory and non-auditory effects of noise on health</i> . Lancet 2014; 383: 1325-32.         |  |
| Week 2<br>Monday<br>10/8/18  | <b>Ergonomics, including hands-on activity (Brogmus)</b>  | <i>Please see course website for readings</i>  |  |
| Wednesday<br>10/10/18        | <b>Introduction to Industrial Hygiene #1 (Que Hee)</b>  | Frumkin, <i>Environmental Health</i> : Ch. 21 (3 <sup>rd</sup> ed) "Work, health and well-being"<br>Ch. 8(3 <sup>rd</sup> ed) "Exposure Assessment..." |  |
| Friday<br>10/12/18           | <b>Introduction to Industrial Hygiene #2 (Que Hee)</b>  |  | <b>HOMEWORK #1</b>   |
| Week 3<br>Monday<br>10/15/18 | <b>Introduction to Environmental Epidemiology #1 (Robbins)</b>  | Frumkin, <i>Environmental Health</i> : Ch. 4 (3 <sup>rd</sup> ed) "Environmental and Occupational Epidemiology"  |  |



| Day                          | Topic & Primary Instructor  | Reading Assignment<br>(Please read prior to the class on the day specified)  | Homework Assignment<br>(submit electronically via course website before class on due date) |
|------------------------------|---|--|--|
| Wednesday<br>10/17/18        | Occupational Health 1 of 3: Total employee health (Hudson), 3-3:30<br>Introduction to Environmental Epidemiology #2 (Robbins), 3:30-5pm | Frumkin, <i>Environmental Health</i> : Ch. 21 (3 <sup>rd</sup> ed) "Workplace Health & Safety"<br>Frumkin, <i>Environmental Health</i> : Ch. 4 (3 <sup>rd</sup> ed) "Environmental and Occupational Epidemiology"              |  |
| Friday<br>10/19/18           | Air Pollution and Health (Cole)   | Frumkin, <i>Environmental Health</i> : Ch. 13 (3 <sup>rd</sup> ed) "Air Pollution"<br>Jerrett et al, 2005<br>Ritz et al, 2007<br>Meng et al, 2010  | Homework #2  |
| Week 4<br>Monday<br>10/22/18 | Occupational Health 2 of 3: UC-wide employee health (Hudson), 3-3:30<br>Municipal Solid Waste Disposal and Recycling (Cole)             | Frumkin, <i>Environmental Health</i> : Ch. 17 (3 <sup>rd</sup> ed) "Solid and Hazardous Waste"   |  |
| Wednesday<br>10/24/18        | Water Quality & Water Scarcity (Cole)   | Frumkin, <i>Environmental Health: From Global to Local (3e)</i> , Chapter 16 "Water and Health"<br>Hanna-Attisha et al, 2010   |  |
| Friday<br>10/26/18           | Environmental Regulations (Sean Hecht)<br>Environmental Regulations - Haz Waste Regulations (Cole)<br>Review for mid-term               | IOM "For the Public's Health" ch 3.<br>NRDC "An Introduction to Federal Environmental Policy"<br>Nriagu, 1990<br>Frumkin, <i>Environmental Health</i> : Ch. 17 (3 <sup>rd</sup> ed) "Solid and Hazardous Waste"<br>Mazur, 2002 | Homework #3  |
| Week 5<br>Monday<br>10/29/18 | How struggles for environmental justice have shaped environmental regulation in the U.S. (Cole)   | Frumkin, <i>Environmental Health</i> : Ch. 11 (3 <sup>rd</sup> ed). "Environmental Justice."<br>Cushing et al. 2015. Racial/Ethnic Disparities in Cumulative..."<br>PEER. 2015. EPA's environmental justice program..."        |  |

| Day                          | Topic & Primary Instructor   | Reading Assignment<br>(Please read prior to the class on the day specified)   | Homework Assignment<br>(submit electronically via course website before class on due date) |
|------------------------------|--|---|--|
| Wednesday<br>10/31/18        | Occupational Health 3 of 3: UCLA Employee health initiatives (WorkStrong and DPP) (Hudson), 3-3:30<br>Pesticides - Farm Workers and Children (Cole)  | Frumkin, <i>Environmental Health</i> : Ch. 18 (3 <sup>rd</sup> ed) "Pest Control and Pesticides"<br>Reynolds et al, 2002  |  |
| Friday<br>11/2/18            | Midterm:<br><ul style="list-style-type: none"> <li>- 25 multiple choice/fill in the blank questions designed to test your retention of materials covered in readings and in class in weeks 1-4 (9/23/18 through 10/21/18)</li> <li>- 5 Environmental Health abbreviations (2 points each; you provide the corresponding expanded/complete name) covered in the lectures, class discussions, and required readings.</li> <li>- 3-4 short answer questions (similar to questions on the initial knowledge assessment)</li> </ul> | NO READING ASSIGNMENT   | NO HOMEWORK  |
| Week 6<br>Monday<br>11/5/18  | Zoonotic and Vector-borne Diseases (Cole)  | Benelli & Mehlhorn, 2016  |  |
| Wednesday<br>11/7/18         | Overview of Methods for Assessing Risk and Assessing Alternatives (Malloy)   | Frumkin, <i>Environmental Health</i> : Ch. 27 (3 <sup>rd</sup> ed) "Risk Assessment"<br>Ch. 28 (3 <sup>rd</sup> ed) "Risk Communication"<br>Jacobs et al. 2016. "Alternatives Assessment..."                                |  |
| Friday<br>11/9/18            | LITERATURE REVIEW PRESENTATIONS  |   | HOMEWORK #4  |
| Week 7<br>Monday<br>11/12/18 | Veterans' Day (no Class)   |   |  |
| Wednesday<br>11/14/18        | Communication & Leadership Activity: Inspection of Food Establishment (guest lecturers: Jennie Wung and Daniel Paek, UCLA EH&S)  | Frumkin, <i>Environmental Health</i> : Ch. 19 (3 <sup>rd</sup> ed)<br>Ch. 26 (3 <sup>rd</sup> ed) "Environmental Health Practice"<br>Please also review UCLA Food Inspection form prior to class (posted on course website) |  |

| Day                          | Topic & Primary Instructor   | Reading Assignment<br>(Please read prior to the class on the day specified)   | Homework Assignment<br>(submit electronically via course website before class on due date) |
|------------------------------|--|---|--|
| Friday<br>11/16/18           | Human health and climate change (Cole)   | Frumkin, <i>Environmental Health</i> :<br>Ch. 4 "Population Pressure"<br>Ch. 12 (3 <sup>rd</sup> ed) "Climate Change"<br>Eldering et al, 2017<br>Smith et al, 2014, pp. 715-742.  | HOMEWORK #5  |
| Week 8<br>Monday<br>11/19/18 | Health Impact Assessment of transportation projects and policies (Cole)  | <i>Posted on course website:</i><br><ul style="list-style-type: none"> <li>• Parry J, Stevens A. Prospective health impact assessment: pitfalls, problems, and possible ways forward. <i>BMJ</i>. 2001 Nov 17;323(7322):1177-82.</li> <li>• Cole BL, Fielding JE. Health impact assessment: a tool to help policy makers understand health beyond health care. <i>Annu Rev Public Health</i>. 2007;28:393-412.</li> </ul> | Homework #6  |
| Wednesday<br>11/21/18        | Environmental determinants of mental and social well-being; Built Environment & Health (Cole)                                  | Ch. 15 (3 <sup>rd</sup> ed) "Healthy Communities."<br>Ch. 20 (3 <sup>rd</sup> ed) "Healthy Buildings."<br>Ch. 25 (3 <sup>rd</sup> ed) "Nature Contact"<br>Ch. 9 (3 <sup>rd</sup> ed) "Environmental Psychology"   |  |
| Friday<br>11/23/18           | Communication & Leadership Activity: Water Quality - Pool Inspection (guest lecturers: Jennie Wung and Daniel Paek, UCLA EH&S) | Please review prior to class (posted on course website):<br><ul style="list-style-type: none"> <li>• UCLA Pool Inspection form</li> <li>• Informational sheet about Virginia Graeme Baker Act</li> </ul> Information Sheet about Basic Swimming Pool Recirculation Systems and Chemistry  |  |
| Week 9<br>Monday<br>11/26/18 | BOOK REVIEW PRESENTATIONS  |   | Homework #7 Presentations  |
| Wednesday<br>11/29/18        | THANKSGIVING   |   |  |

| Day                          | Topic & Primary Instructor   | Reading Assignment<br>(Please read prior to the class on the day specified)   | Homework Assignment<br>(submit electronically via course website before class on due date) |
|------------------------------|--|---|--|
| Friday<br>11/30/18           | THANKSGIVING   |   |  |
| Week 10<br>Monday<br>12/3/18 | BOOK REVIEW PRESENTATIONS  |   | Homework #6 due<br>Homework #7 Presentations   |
| Wednesday<br>12/5/18         | Oil, Gas and Health (Cole)<br>Risk Communication & Risk Perception (Cole)  | Colborn et al, 2011<br>Frumkin, <i>Environmental Health</i> :<br>Ch. 27 (3 <sup>rd</sup> ed) "Risk Assessment"<br>Ch. 28 (3 <sup>rd</sup> ed) "Risk<br>Communication" |  |
| Friday<br>12/7/18            | Optional Field Trip to Esperanza Community Housing (Cole) <ul style="list-style-type: none"> <li>• MEET IN FRONT OF LOT 9 AT 11 am; BACK ON CAMPUS BY 5 PM</li> <li>• Meet promotores and Director Nancy Ibrahim</li> </ul> Discussion with promotores regarding what their work is like, what services provided, challenges, opportunities for partnerships   |   |  |
| Finals Week                  | FINAL EXAM IS FRIDAY, DECEMBER 14, 2018<br>11:30 AM - 1:30 PM; Location 61-269 CHS <ul style="list-style-type: none"> <li>- 25 multiple choice/fill in the blank questions designed to test your retention of materials covered in readings and in class in weeks 5-10 (10/24/18 through 12/8/18)</li> <li>- 5 Environmental Health abbreviations (2 points each; you provide the corresponding expanded/complete name) covered in the lectures, class discussions, and required readings.</li> <li>- 4 short answer questions (identical to questions 5-8 of the initial knowledge assessment)</li> </ul> |   |  |

**Assigned Readings** (see schedule above for the class session corresponding to each reading)

**NB: These readings are available on-line. Access is free for UCLA students, faculty and staff.**

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