

RUTGERS

School of Public Health

- Course Title:** Introduction to Environmental Public Health Sciences, fall 2014
- Course Number:** PHCO0503
- Course Location:** Mondays ~18:10-21:00, 9/8/2014-12/15/2014, at Rutgers SPH 3a/b, Piscataway, NJ
- Course Date & Time:** As an in-person course with an on-line discussion board component (unless prior special permission, e.g., as a MD/MPH student in HSAP to take as an on-line hybrid course)
- Course Instructor:** Derek G. Shendell, D.Env, MPH, Assistant Professor, Rutgers SPH-ENOH (732) 235-5409, voice mail checked from offices and field research, shendedg@sph.rutgers.edu
- Office Hours:** *By appointment*; however, instructor will remain after class for questions Monday to ~21:45.
- Course Assistant:** Mr. Mawuena Quarcoo, MS, Rutgers SPH/ENOH PhD Candidate, quarcoma@sph.rutgers.edu
- Required Course Text:** Environmental Health: From Global to Local. Howard Frumkin, Ed. 1st (or 2nd) Ed. S.F., CA: Jossey-Bass. 8/2005 (or, 2010).

Additional/Supplemental Readings/Resources:

For suggested supplemental readings by topic/subtopics covered in each thematic module, please see online supplemental materials.

- Course Description:** We explore ways in which particular characteristics of our environment potentially affect health. We examine health problems associated with biological, chemical, physical, and radiological agents, how they impact food safety, infectious disease, air quality (indoor, outdoor), water quality, and land resources in community and occupational settings. Policies intended to improve public health via mitigation of environmental impacts are reviewed.

Selected Department Competencies Addressed: Each Department identifies competencies for each degree offered. The competencies addressed in this course for the MPH and doctoral degrees (as a core course) in Environmental and Occupational Health include:

- Describe the major environmental health problems to the general public as well as specific communities;
- Explain the basic mechanism of toxicology and dose-response regarding environmental toxicants;

- Describe the federal and state regulatory programs related to environmental (community) and worker (occupational) protection;
- Develop a testable model of environmental exposures (one or more agents) and adverse health outcomes (causing injury, disability, or other measure of morbidity or mortality); and,
- Specify current environmental risk assessment approaches and methods for a particular hazard or risk.

Please visit the Department webpages on the School of Public Health's website at <http://sph.rutgers.edu/> for additional competencies addressed by this course for other degrees and departments.

Course Objectives: By the completion of this course, students will be able to:

- Describe the spectrum of environmental and occupational health problems;
- Characterize target populations exposed to hazardous agents, and susceptibility and vulnerability factors;
- Describe the tools that are used to analyze health impacts of environmental exposures, such as the risk assessment process, epidemiology, and industrial hygiene;
- Describe the main methods used to control health hazards, i.e., reduce and/or prevent exposure;
- Describe the existing regulatory framework for controlling environmental and occupational agents.

(Note: These are based on the eight ASPH/CEPH core competencies for environmental health.)

Course Requirements and Grading: With % provided of 1000 total points for course:

Exams and assignments:

~50%: across multiple written tasks

Participation/Discussion Boards, Attendance:

~20%: as 2-4% for discussion participation each 1-2 modules (points for new/reply posts)

Papers #1-#2 (two-page papers + Appendix):

~30%: 34%, or 12% each, and 10% for oral talk at final class

This translates at the end of the course to:

93.6-100% FOR A
(88.6) 89-93.5% FOR A-
84.6-89% (88.5) FOR B+
80.6-84.5% FOR B
76.6-80.5% FOR B-
72.6-76.5% FOR C+
69-72.5% FOR C
C-/D/F is ≤68 or INC, as determined

Tiebreakers will be determined by performance on the four quizzes/assignments, then papers.

Course Schedule: *Please pages comprising the online course management materials, e.g., supplemental notes, detailed Excel calendar by Module (with topics).*

School of Public Health Honor Code: The School of Public Health Honor Code is found in the student bulletin (sph.rutgers.edu/academics/catalog/index.html). Each student bears a fundamental responsibility for maintaining academic integrity and intellectual honesty in his or her graduate work. For example, all students are expected to observe the generally accepted principles of scholarly work, to submit their own rather than another's work, to refrain from falsifying data, and to refrain from receiving and/or giving aid on examinations or other assigned work requiring independent effort. In submitting written material, the writer takes full responsibility for the work as a whole and implies that, except as properly noted by use of quotation marks, footnotes, etc., both the ideas and the works used are his or her own. In addition to maintaining personal academic integrity, each student is expected to contribute to the academic integrity of the school community by not facilitating inappropriate use of her/his own work by others and by reporting acts of academic dishonesty by others to an appropriate school authority. It should be clearly understood that plagiarism, cheating, or other forms of academic dishonesty will not be tolerated and can lead to sanctions up to and including separation from the Rutgers School of Public Health.

Policy Concerning Use of Recording Devices and Other Electronic Communications Systems: When personally owned communication/recording devices are used by students to record lectures and/or classroom lessons, such use must be authorized by the faculty member or instructor who must give either oral or written permission prior to the start of the semester and identify restrictions, if any, on the use of mobile communications or recording devices.

Rutgers SPH, Introduction to Environmental Health PHCO0503

Module	Week	Class (lecture / discussion)	For Week of Monday	Primary Topic of Class
	1		9/1/14	<i>NO CLASS, LABOR DAY HOLIDAY</i>
I	2	1 and 2	FOR 9/8/14 (Module I reading done by 9/15; disc. board test/post done by 9/11)	Introduction, Course Overview
I-to-II (exposure science), II	end of 2, 3 and 4	3 and 4	start 9/8/14, finish 9/15/14 and 9/22/14	Core Concepts and Terminology
				Introduction to exposure science/exposure assessment and role in risk assessment.
				Introduction to the quantitative risk assessment (QRA) process, and environmental health toxicology and related human physiology.
				Introduction to epidemiology in EPH sciences.
III	5	5	9/29/14	Overview of indoor air and environmental quality: e.g., homes, schools--traditional, portables--offices, in-vehicle (cars/light trucks), and school buses.
III	6	6	10/6/14	Overview of outdoor air pollution, and human and ecological health.
III	7	7	10/13/14	Overview of energy, transportation, and the built environment.
III-to-IV	8 and 9	8 and 9	10/20/2014 and 10/27/14	Overview of water resources, drinking/potable water quality and wastewater / storm water treatment
IV				Integration of modules III-IV pertaining to water resources
V	10	10	11/3/14	Overview of municipal solid and hazardous waste, and industrial pollution to air, soil and waters
VI (and into VII)	11	11	11/10/14	Overview of chemical pesticides, and integration into community-based research
	12		11/17/14	<i>NO CLASS, APHA 2014, New Orleans, LA (Please meet with partners to prepare for Town Hall presentation! TA available at SPH, time TBD.)</i>
	13	12	11/24/14	Overview of children's environmental health (as one example of vulnerable population group, then also seniors), precaution and primary prevention
VII and into VIII, including LDCs	14	13	12/1/14	Environmental justice. Schools/community-based participatory research in EPHS. Overview of risk perception, communication and management in EPHS including with respect to disaster preparedness and emergency response.
				Disaster preparedness and response planning activities.
VIII/course integration	15	14	12/8/14	Global Climate Change
Course integration "Town Hall"	16	15	12/15/14	<u>"Town Hall" = Short oral presentations (5-8 minutes, TBD) on one of the papers (graded/returned to students in advance); individual or in pairs, TBD.</u>

Dr. Shendell and TA finish grading 12/15-18/2014, to submit on or before 12/19/14.

NOTE: Throughout modules III-VIII, there are examples of: EPH issues in urban areas of LDCs, especially "mega cities" and slums on periphery; EPH issues in rural areas of LDCs.

Fall 2014, Introduction to Environmental (Public) Health (Sciences), PHC00503

Module	Required Reading in Text to Purchase if 1st Edition (NOTE: Page numbers noted only because Dr. Shendell owns 1st Ed. ...)	Required Reading in Text to Purchase if 2nd Edition
I	Introduction (xxix-xlix), Ch. 5 (+ NOTE: p.101 Table 5.1) Ch. 10 (221-226) Ch. 30 (895-922) Ch. 33 (961-985)	Introduction, Ch. 5 Ch. 10 Ch. 27 Ch. 30
II	Ch. 2 (24-44), Ch. 6 (128-130, 136-140), Ch. 32 (940-958 not 949 ^{Top} -953 ^{Bottom}), Ch. 3 (46-69), and Ch. 4 (72-93)	Ch. 2 Ch. 6 Ch. 29 Ch. 3-4
III	Ch. 14 (331-357) Ch. 17 (425-432) ----- Ch. 5 (103-115) Ch. 13 (313-316) Ch. 15 (362-381) Ch. 16 (387-390, 392-395, 399-404, 407-409) Ch. 22 (625-642, 644-645) Ch. 23 (652-656, 658-680)	Ch. 12 part of Ch. 14 now Ch. 5 Ch. 11 (353-356) Ch. 13 part of Ch. 14 now Ch. 19 Ch. 20
IV	Ch. 18 (454-482, 490, 494-506)	Ch. 15
V	Ch. 19 (520-526, 530-541)	Ch. 16
VI	Ch. 20 (544-548, 559-576) Ch. 21 (581-6, 589-94, 597-601, 604-7, 610-14, 618-21) Ch. 28 (805-836)--lots of examples Ch. 29 (849-854, 863-871)	Ch. 17 Ch. 18 Ch. 25--lots of examples Ch. 26
VII	Ch. 8 (170-192) Ch. 13 (288-290, 295-304, 308-313, 316-321) Ch. 34 (988-1002)	Ch. 8 Ch. 31 Ch. 11 Ch. 13 Ch. 23
VIII	Ch. 10 (226-233) Ch. 11 (238-263) Ch. 26 (747-751, 753-766, 775-777)	

2nd Edition (newer) of Frumkin textbook vs. 1st Edition (older, owned/read by Dr. Shendell):

NOTE: The titles and organization of chapters are similar....

There are only a few differences. Thus, the *reading assignments by chapter* remain the same.

1st Ed. = 2nd Ed. with respect to Introduction, Part I Ch. 1-8 (except new author for any revisions to Ch. 1).

1st Edition's Part I Ch.9, Part II Ch. 12 and Part V Ch. 35 have been deleted.

1st Edition's Part II Ch. 9, 10 and 11 are Part II Ch. 10, 11 and 13, respectively, in the 2nd Edition.

1st Edition's Part III Ch. 14, 15 and 18 are Part III Ch. 12, 13 and 15, respectively, in the 2nd Edition.

1st Edition's Part III Ch. 16-17 were combined and retitled into Part III Ch. 14 in the 2nd Edition.

1st Edition's Part IV Ch. 19-28 = 2nd Edition's Part IV Ch. 16-25, except for a few modifications to chapter titles and/or co-authors listed with Dr. Frumkin as Editor (e.g., "Indoor Air" now "Healthy Buildings" to correctly reflect indoor air and environmental quality, in my opinion at first glance).

1st Edition's Part V Ch. 29-34 and 36 = 2nd Edition's Part V Ch. 26-31 and 32, respectively except for a few modifications to co-authors listed with Dr. Frumkin as Editor.

PHCO0503: Introduction to Environmental Public Health Sciences (EPHS)

ONLINE SUPPLEMENTAL NOTES FOR ENROLLEES BEYOND COURSE SYLLABUS

Due dates for assigned readings/materials, quizzes, and the assignment:

Exams/Quizzes/Assignments help evaluate mastery of important concepts and science-based facts, and the ability to integrate concepts within and across modules through critical thinking and a certain level of creativity / open mindedness. For the in-person and mostly hybrid on-line course formats of PHCO0503, groups of quizzes can be viewed as about equal in length and in total points to a mid-term or a final exam as in most other in-person core courses (see other table). The course has eight modules. In fall 2014, there is no final exam. Instead, we have mid-terms/take-home quizzes, papers, and oral presentations for points (i.e., a % of grade).

Another document describes the written assignments, i.e., what we call papers #1-2, with a short oral presentation on one or both of them at a “Town Hall” meeting at the final in-person class.

Policy on late assignments:

Three points will be deducted from any assignment’s grade for each day the assignment is late; maximum -10. NOTE: If a task is submitted \geq four days late, then he or she will receive a zero.

Exception to policy:

If a student has a serious conflict for documented personal/family or full-time work related reasons, he or she must notify the instructor at the start of the course or as soon as possible, and certainly before the start of the final week of the particular module/assignment. We will agree on an alternative due date that is fair to the student and to the class as a whole.

PHCO0503: Introduction to Environmental Public Health Sciences (EPHS)

Attendance policy:

The nature of the course makes attendance relevant—and thus somewhat critical—throughout the semester, given the discussion and use of extra supplemental materials in class (photos, short articles not available on-line, diagrams, examples of data from professor's past and ongoing research, etc). But, this is graduate school, we do not take attendance unless there is an in-class exam or assignment or presentation to be worth points (NOTE: 1000 points make up your grade for this course.) Students may choose to progress at recommended pace, or at a faster pace, with readings. Fall 2014: Request you read textbook before class/part of Module covered. It is also recommended to download PPT for a given module on day of class between 2-6 PM.

The goal is the professor and doctoral teaching assistants (TA) will together grade quizzes / assignments—with an answer key constructed by the professor as applicable—and return scores and any comments to students within one calendar week. Grades (raw scores, before any deductions for tardiness) will be posted online in Moodle grade book soon afterwards.

The instructor grades papers #1-2 for individuals or teams; the TA grades ~10-20% of papers, for a learning experience and to confirm the range of scores earned (high-medium-low).

Any guest lectures (by TA, etc) are meant to enrich your experience in graduate courses. We may videotape them and make both their PowerPoint and video/audio available afterward.

PHCO0503: Introduction to Environmental Public Health Sciences (EPHS)

Structured, directed class discussions using PHCO0503 Moodle online discussion boards:

There are eight modules in this course. While there will be chances for group discussion during class meetings, the professor and doctoral teaching assistants will also always participate with enrolled students in the on-line discussion boards. These are NOT web blogs. We will have structured discussions to enhance each student's understanding of course concepts.

Each student-- for each discussion board every 1-2 modules-- during the Thursday to Sunday a given discussion board is open on Moodle must contribute at least the following to earn points:

- a.) One (or more) original posting;
- and,**
- b.) Three (or more) posts in response to another participant's post.

NOTE: For module I only--and to confirm access to Moodle--students should compose only two original posts, which are based on a major interest in environmental health/sciences (1st post) and in occupational health (2nd post) from their life experiences to date.

We hope most, if not all, participants will contribute multiple postings to enrich our learning experience, especially in multi-week modules. A posting may be related to one of the following:

- New journal article of interest, i.e., directly relevant to current module or \geq two modules;
- Non-profit or government agency report—local (city, county), state, federal—of interest;
- A media “current event” photo and/or article (electronic newspapers and magazines);
- One of the pictures or data tables/figures Dr. Shendell marked in module materials (PowerPoint) using *dark green, bold, italicized font* (with “class discussion”).

NOTE: You can access journal articles through our Rutgers libraries online. The TA is available to help demonstrate this functionality, after we do so once at 1st class meeting (as requested).

A typical posting should provide a citation for the resource, including the hyperlink to the photo, article/report or abstract (if a journal article) online, as well as a short summary. A short summary means no more than one paragraph. Thus, please only highlight science conducted and its relevance to EPHS, occupational health/industrial hygiene and/or public health in general.

NOTE: A post in response to Dr. Shendell's prompts (see below) in a module's PowerPoint or other news/media post is automatically a reply; please do NOT start new post on same topic!!!!

PHCO0503: Introduction to Environmental Public Health Sciences (EPHS)

Academic Honesty and Related Ethics:

This policy represents a core value and each member of the University community is responsible for abiding by its tenets. Lack of knowledge of this policy is not an acceptable defense to any charge of academic dishonesty. Each member of the academic community, including students, faculty, and staff, are expected to report violations of these standards of academic conduct to the appropriate authorities. The procedures for such reporting are on file. In an effort to foster an environment of academic integrity and to prevent academic dishonesty, students are expected to discuss with faculty expectations and any questions regarding standards of conduct. Students are encouraged to discuss freely with faculty, academic advisors, and other members of the University community questions pertaining to this policy's provisions.

Plagiarism is presenting another person's work as one's own. Plagiarism includes paraphrasing or summarizing the works of another person without any acknowledgement and submitting another student's work as one's own. Also, any work, in whole or in part, taken from the Internet or other computer-based source without proper reference (e.g., "Authors or Agency, Title of Article or Report, Internet, URL, date accessed.") will be considered plagiarism. For journal articles, books and other printed media, and websites, both APA and Vancouver are well-known examples acceptable formats to use on papers #1-2 to provide proper citations.

If you have questions about reference citation format, please ask by e-mail.

Please also refer to course syllabus in approved Rutgers SPH format (as of summer 2013).

Students with disabilities:

If you have a condition such as a medical, physical, psychiatric / emotional or learning disability which would make it difficult for you to complete the work described in this syllabus by the stated deadlines, then please notify Rutgers School of Public Health and the instructor at the start of the course so alternative arrangements can be made. Any information and documentation of the disability provided to the instructor and/or the TA will be confidential.

Module	Primary Topic of Class	Class Subtopics	
I	Introduction, Course Overview	Syllabus, Course Management Materials for Enrolled Students, Topics, Readings, Forms of Communications;	Computer Requirements for Moodle (NOT SAKAI/ANGEL), review contents of Moodle site for this course this semester;
	Core Concepts and Terminology	History and practice of EPH sciences; "historical timeline" (policy, laws, events); common acronyms; environmental / ecological sustainability and health in various settings, local to global;	types of sources (human, natural), agents, media, microenvironments; human / ecological exposure: identify, assess, reduce or prevent; human time-activity-location patterns; fate & transport concepts.
I-to-II (exposure science), II	Introduction to exposure science/exposure assessment and role in risk assessment.	QRA process six steps; Environmental Hazards / Pollution / Contaminants / Exposure (agents, pathways, routes, etc);	types of sources (human, natural), media; human / ecological exposure: identify, assess, reduce or prevent; human time-activity-location patterns; fate & transport concepts.
	Introduction to the quantitative risk assessment (QRA) process, and environmental health toxicology and related human physiology.	QRA process six steps; Environmental Hazards / Pollution / Contaminants / Exposure (agents, pathways, routes, etc). Overview of toxicology and human physiology;	lead, mercury and other illustrative examples; toxicity testing; carcinogens; susceptibility factors; dose-response (D-R) curves; gene-environment. D-R curves.
	Introduction to epidemiology in EPH sciences.	Occupational epidemiology (adult workers, in private and public sector), workplace (industrial, office buildings, mines) health and safety (OSHA, etc)	Environmental epidemiology: acute exposure effects, infectious diseases, injuries (unintentional due to built environment). TB exercise I.
III	Overview of indoor air and environmental quality: e.g., homes, schools--traditional and portables, offices, in-vehicle (cars/light trucks), and in school buses.	Major biological, chemical, physical and radiological agents and their sources, conditions necessary to be present at all and/or at higher levels; health impact concerns;	known interventions (physical, education) or behaviors to reduce or prevent exposure to agents; connections to environmental health sciences issues in less developed countries (LDCs).

III	Overview of outdoor air pollution, and human and ecological health.	Federal and state laws, measured levels of criteria pollutants and monitoring stations, "air toxics," acid rain, emissions controls VS trading/caps, pesticide drift, crop burnings;	Overview of impacts of acute and chronic exposure to various air pollutants outdoors and health--human (elderly, adults, children) and ecological (forests, crops)
III	Overview of energy, transportation, and the built environment.	Energy concepts and terminology (sources, types, efficiency of sources and things that use the energy);	Discuss transportation and the built environment, including urban sprawl, using local, domestic and international examples
IV	Overview of water resources, drinking/potable water quality and wastewater / storm water treatment	Overview of types of soils and water bodies, including potential adverse impacts of natural events (drought, floods, hurricanes);	Overview of drinking water and wastewater/storm water run-off treatment processes and infrastructure, including potential adverse impacts of natural events and human activities
III-to-IV	Integration of modules III-IV pertaining to water resources	Overview of waste-related concepts pertaining to air quality, water quality and human and ecological health: hydraulic fracturing or fracking, pharmaceuticals, old storage container of chemicals (even pesticides), etc. <u>Short films/movie clips as well!</u>	
V	Overview of municipal solid and hazardous waste, and industrial pollution to air, soil and waters	Definitions; reduce, reuse, recycle, industrial ecology and "closed loop;" revisit federal laws (TSCA, RCRA, CERCLA) and Superfund site examples;	municipal solid waste disposal and potential concerns; export of hazardous waste across states/to other nations; connections to environmental health sciences issues in LDCs.

VI (and into VII)	Overview of chemical pesticides, and integration into community-based research	Use and application of pesticides in agriculture, livestock production and food safety (preservatives versus organic);	Pest control inside and outside homes and schools; integrated pest management; applied research examples.
	Overview of children's environmental health (as one example of vulnerable population group, then also seniors), precaution and primary prevention	Factors related to anatomy, physiology, and behaviors/time-location-activity patterns, which vary with ages 0-18, that make children more susceptible to harm	Professional advocacy statements on Precautionary Principle in relation to chemicals; E.U. "REACH" policy compared to U.S. TSCA; applied research examples.
VII and into VIII including LDCs	Environmental justice. Schools/community-based participatory research in EPHS. Overview of risk perception, communication and management in EPHS including with respect to disaster preparedness and emergency response.	Concepts of, origins and history of precaution/prevention and of environmental justice including origins/history. Community and worker "right to know" regulations (e.g., EPCRA and TRI, etc); UCLA PCS results, etc.	
VIII (continued)	Disaster preparedness and response planning activities.	Examples of CBPR by Dr. Shendell and colleagues at Rutgers SPH, et al. Discuss types of natural disasters and terrorist activities related to EPHS; e.g., implications of the impacts of 9/11/01 in NYC, Asian tsunamis, August 2005 hurricanes in Gulf Coast area, Hurricane Irene 2011, Superstorm Sandy 2012, etc.	
VIII (continued) + course integration	Global Climate Change	Discussion of global warming gases of most present concern (and sources and "sinks"/reservoirs), human and ecological health outcomes.	Discuss basic concepts of global climate change (greenhouse gases, etc) in relation to climate vs. weather events.

Fall 2014, Introduction to Environmental (Public) Health (Sciences), PHCO0503

Module	Supplemental Reading, besides in-class group discussion examples; may change. (NOTE: Various photos--in PowerPoint and PDF files--for review on class on-line discussion board)
I	CAFA CA Asthma Advocacy Data Book (from Section II, pp17-25) 030909 President Obama <u>memo</u> released on Scientific Integrity January 2009 NAS-IOM EHS Decision Making <u>workshop report</u>
II	Examples of different toxicology dose-response curves, with short readings/data (points) Birnbaum L. 2009. EHP vol 117 no 11 pp. A478. (an editorial...reviewed in class)
III	Air Quality Standards via CA Air Resources Board (compare CA-to-USA, WHO-to-CA; WHO in text) Shendell et al. 2007. <u>J Environ Health</u> v70 n3 pp28-31 ----- Deary A. 2004. <u>EHP</u> vol 112 no 11 (an editorial) Dannenbergh et al <u>AJPH</u> vol 93 no 9 (abstract only) Staunton et al. 2003. <u>AJPH</u> vol 93 no 9 (abstract only) <u>MMWR</u> , 2005. vol 54 pp949-52 in <u>JAMA</u> vol 294 no 17 ----- Shendell et al. 2004. <u>J Sch Health</u> vol74 no10 pp390-96
IV	NOTE: USEPA, NJDEP and local agency websites (e.g., <i>Rec. Wate Illness Awareness week late May</i>) <i>as well as private sector innovators for diagrams and examples</i>
V	Halford CandEN 022508 + US ONDCP Feb2007, on disposal of prescription or "OTC" Rx EPA TRI analysis 2010 final report press release 010512
VI	Lu et al. <u>EHP</u> 2005 vol 114 pp260-63 Lu et al. <u>EHP</u> 2008 vol 116 no4 pp537-42 Lu et al 2010 <u>EHP</u> v118 n11 pp1625-30 Etzel EHP 2010 vol118 no10 (editorial on CEH Hx) & USGAO GAO-10-205 (CEH in federal agencies)
VII	Shendell et al. 2010. JAAE v2 n2 pp81-90 (NOTE: <i>Data in quantitative papers shared in-class</i>) U.S. CDC 2012 publications related to asthma prevalence, etc data: U.S., NJ Frumkin H. 2005. <u>EHP</u> vol 113 no 5 (editorial)
VIII	Excerpts from <u>EHP</u> , <u>J Environ Health</u> , <u>MMWR</u> and other federal agency resources like U.S. GAO, related to 2005 Hurricanes Katrina/Rita and global climate change and disaster response IPCC Nov2007 Key Health Messages, Re: Global Climate Change

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III	7	7	10/13/14	Overview of energy, transportation, and the built environment.
III-to-IV	8 and 9	8 and 9	10/20/2014 and 10/27/14	Overview of water resources, drinking/potable water quality and wastewater / storm water treatment
IV				Integration of modules III-IV pertaining to water resources
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VI (and into VII)	11	11	11/10/14	Overview of chemical pesticides, and integration into community-based research
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