

1. General Information

1a. Submitted by the College of: PUBLIC HEALTH

Date Submitted: 4/9/2013

1b. Department/Division: Dept Of Preventive Med & Envir

1c. Contact Person

Name: Becki Flanagan

Email: becki@uky.edu

Phone: 218-2092

Responsible Faculty ID (if different from Contact)

Name: Nancy Johnson

Email: nejohn2@uky.edu

Phone: 323-4737

1d. Requested Effective Date: Semester following approval

1e. Should this course be a UK Core Course? ~~Yes~~ NO

~~Inquiry - Nat/Math/Phys Sci~~

2. Designation and Description of Proposed Course

2a. Will this course also be offered through Distance Learning?: No

2b. Prefix and Number: CPH 320

2c. Full Title: Fundamentals of Environmental Health

2d. Transcript Title:

2e. Cross-listing:

2f. Meeting Patterns

LECTURE: ~~45~~ 3

2g. Grading System: Letter (A, B, C, etc.)

2h. Number of credit hours: 3

2i. Is this course repeatable for additional credit? No

If Yes: Maximum number of credit hours:

If Yes: Will this course allow multiple registrations during the same semester?

2j. Course Description for Bulletin: An overview of the physical factors that influence human health, including hazards from unsanitary water, polluted air, traumatic injury hazards, toxins, radiologic risks, and other features of the natural and human made environment that can kill, injure, maim, and cause disease in human populations. Special focus is given to understanding the relationships between biological, chemical, and other factors that produce unhealthy environments that sicken individuals throughout their lifespan. Additional topics include the important influence of environmental hygiene, restaurant inspections, occupational safety and health issues, clean water standards, air pollution regulations, and other laws and regulations that protect the health and safety of human populations.

2k. Prerequisites, if any: none

2l. Supplementary Teaching Component:

3. Will this course taught off campus? No

If YES, enter the off campus address:

4. Frequency of Course Offering: Summer, Fall, Spring

Will the course be offered every year?: Yes

If No, explain:

5. Are facilities and personnel necessary for the proposed new course available?: Yes

If No, explain:

6. What enrollment (per section per semester) may reasonably be expected?: 50

7. Anticipated Student Demand

Will this course serve students primarily within the degree program?: Yes

Will it be of interest to a significant number of students outside the degree pgm?: Yes

If Yes, explain: [var7InterestExplain] Growing interest among students on impact of the environment on human health.

8. Check the category most applicable to this course: Relatively New – Now Being Widely Established,

If No, explain:

9. Course Relationship to Program(s).

a. Is this course part of a proposed new program?: Yes

If YES, name the proposed new program: Bachelor of Public Health

b. Will this course be a new requirement for ANY program?: No

If YES, list affected programs:

10. Information to be Placed on Syllabus.

a. Is the course 400G or 500?: No

b. The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading differentiation if applicable, from 10.a above) are attached: No Yes

Distance Learning Form

Instructor Name:

Instructor Email:

Internet/Web-based: No

Interactive Video: No

Hybrid: No

1. How does this course provide for timely and appropriate interaction between students and faculty and among students? Does the course syllabus conform to University Senate Syllabus Guidelines, specifically the Distance Learning Considerations?

2. How do you ensure that the experience for a DL student is comparable to that of a classroom-based student's experience? Aspects to explore: textbooks, course goals, assessment of student learning outcomes, etc.

3. How is the integrity of student work ensured? Please speak to aspects such as password-protected course portals, proctors for exams at interactive video sites; academic offense policy; etc.

4. Will offering this course via DL result in at least 25% or at least 50% (based on total credit hours required for completion) of a degree program being offered via any form of DL, as defined above?

If yes, which percentage, and which program(s)?

5. How are students taking the course via DL assured of equivalent access to student services, similar to that of a student taking the class in a traditional classroom setting?

6. How do course requirements ensure that students make appropriate use of learning resources?

7. Please explain specifically how access is provided to laboratories, facilities, and equipment appropriate to the course or program.

8. How are students informed of procedures for resolving technical complaints? Does the syllabus list the entities available to offer technical help with the delivery and/or receipt of the course, such as the Information Technology Customer Service Center (<http://www.uky.edu/UKIT/>)?

9. Will the course be delivered via services available through the Distance Learning Program (DLP) and the Academic Technology Group (ATL)? NO

If no, explain how student enrolled in DL courses are able to use the technology employed, as well as how students will be provided with assistance in using said technology.

10. Does the syllabus contain all the required components? NO

11. I, the instructor of record, have read and understood all of the university-level statements regarding DL.

Instructor Name:

**UNIVERSITY OF KENTUCKY
COLLEGE OF PUBLIC HEALTH**

Course Syllabus

CPH 320 Fundamentals of Environmental Health
Fall 2014

Tuesday – Thursday, time TBA
Credit hours: 3 semester hours

Contact information

Faculty: Nancy Johnson, DrPH, MSPH, CIH
Assistant Professor, Preventive Medicine and Environmental Health
Markey Cancer Center, Roach Building
800 Rose Street, CC441

OR

111 Washington Avenue, Room 215B

Email address: nancy.e.johnson@uky.edu

Office phone 323-4737

Cell phone 338-0961

Office hours will be Wednesdays, 1 – 2:30 pm at the Washington Ave. office, or by appointment. The preferred method for students to contact instructor is through e-mail.

Course description: An overview of the environmental factors that influence human health, including hazards from unsanitary water, polluted air, traumatic injury hazards, toxins, radiologic risks, and other features of the natural and human made environment that can kill, injure, maim, and cause disease in human populations. Special focus is given to understanding the relationships between biological, chemical, and other factors that produce unhealthy environments that sicken individuals throughout their lifespan. Additional topics include the important influence of environmental hygiene, restaurant inspections, occupational safety and health issues, clean water standards, air pollution regulations, and other laws and regulations that protect the health and safety of human populations.

Course rationale: This course will provide undergraduates with grounding in basic principles of environmental and occupational health and an understanding of historical events that shaped current environmental and occupational health policies. Similar to real life, students will learn to address complex issues within a team framework. With this acquired knowledge, students will more accurately assess threats to environmental and occupational health and be able to communicate that assessment to a wider audience.

Course prerequisites: none

Course objectives:

1. Use scientific literature in occupational and environmental health to explain threats from environmental and occupational hazards.
2. Identify policies, regulations and enforcement used to prevent, modify and remove environmental and occupational public health hazards and risks.
3. Recognize ways to anticipate, recognize, evaluate, and control environmental health risks.
4. Use appropriate communication strategies to describe environmental and occupational health issues.
5. Associate basic principles of biology and chemistry with environmental hazards and environmental health.
6. Contribute to a team approach in presenting information on environmental and occupational threats to public health.

Undergraduate Public Health Learning Outcomes:

1. Outline approaches for assessing and controlling environmental hazards that affect community health.
2. Recognize the importance of key environmental health events and milestones in the history and development of the field of public health.
3. Analyze alternative viewpoints regarding an environmental health topic.
4. Identify stakeholders who influence environmental health programs and interventions.
5. Describe how the methods of environmental epidemiology and surveillance are used to safeguard the population's health.
6. Assess the source and quality of health information and data, as related to individual and community health.

Required textbook:

Friis, Robert H. Essentials of Environmental Health. 2nd edition; Sudbury, MA: Jones & Bartlett Learning 2012.

Course requirements and learner evaluation: The grade reported at Midterm will include your grades on class assignments and your midterm examination grade:

350-315 = A
314-280 = B
279-245 = C
244-210 = D
<209 = E

Final course grade will reflect the sum accumulation of points earned in the class, as follows:

1000-900 = A
899-800 = B
799-700 = C
699-600 = D
<600 = E

Based upon evaluation of the following activities:	
Class Assignments (20 points each)	400
Chapter study questions (280 points subtotal)	
Documentary review (90 points subtotal)	
In-class assignment (30 points subtotal)	
Midterm	150
Group research and multimedia presentation	200
Individual effort (150 points)	
Group grade (50 points)	
Final Exam	250

Total = 1000 pts

CLASS ASSIGNMENTS (400 points total). Class assignments are designed to keep you present and engaged with course material. You will be graded on correct answers to questions in the assignments.

Chapter Study Questions. (20 points for each question set) The questions are located at the end of each of the 14 chapters. We will discuss many of the questions in class during the lecture. Five (5) questions from each chapter set will be assigned for you to answer in writing as homework (that means that each question is worth 4 points). Answered questions will be due before or at the start of the next class each week. The assignment must be printed and physically turned in unless other arrangements have been made with me. Late submission of written responses to assigned questions will receive a zero. Answering the study questions will keep you on track over the course of the semester and will be a great way to prepare for the midterm and final. I will not know if you have worked on study questions by yourself or with others unless your responses match word-for-word with someone else in the class – blatant copying is unacceptable and will result in a zero grade for the assignment. I do not mind if you work with others, but it is to your advantage to know and understand the answer you write and submit for a grade if you hope to do well on examinations. **Study questions will be graded as correct or incorrect; partial credit will be given for partially correct answers.**

Documentary review. (15 points for each review) Over the course of the semester we will watch 6 documentary videos. At the beginning of each film class, a 5-item documentary review survey will be distributed; each answered item is worth 3 points. The survey needs to be completed before the end of class and turned in before you leave. **The survey will be graded for complete answers; partial credit will be given for partially correct answers.**

In-class assignment. (10 points for each worksheet) After Spring Break, there will be two classes with active learning assignments in class. The activities are based on articles in *Environmental Health Perspectives*, one of the leading peer-reviewed environmental health journals in the world. These activities will help you apply journal content to real-world environmental problems. Each activity will be guided with a worksheet. **Correct answers will be graded relative to the total number of questions on the respective worksheet; partial credit will be given for partially correct answers.**

MIDTERM (150 points total) The midterm examination will cover all course content up until the date of the midterm. Completion of study questions and exercises will be highly beneficial to your mastery of the material.

GROUP RESEARCH & MULTIMEDIA PRESENTATION (200 points total) You have watched and learned from a number of documentaries this semester. This is your chance to make a mini-documentary of your own.

Significant environmental health events listed below have shaped policy and public opinion in the U.S. and globally. This project will help you and your classmates better understand the context of environmental health in the 21st century by understanding the history that shaped it.

Many environmental health and public health professionals work in multi-disciplinary teams. While each person is responsible for part of a project, each person is also responsible for the final outcome. It is important to understand that even the best data is wasted if the project team is unable to accurately describe findings and explain those findings in a way that informs the general public and provides valid reasons for effectual corrections.

Environmental/Occupational Exposure Events

Exxon-Valdez spill	European BSE
BP spill in Louisiana	Bangladesh arsenic exposure
Minimata Disease in Japan and Canada	Mount Pinatubo volcano
Chernobyl	Izmit
Hawk Mountain	1953 Dutch flood
Lead-based paint	Itai-itai disease
Mahwah, NJ paint disposal	Vermiculite in Libby, Montana
Bhopal – Union Carbide gas leak	Paducah gaseous diffusion plant
Seveso – Italian dioxide spill	Dayhoit superfund site
1952 London smog	Ebola
Love Canal	Radium watch dial painters
Baia Mare cyanide	Cholera in Haiti

Groups of 5 students will form in the first class of the semester and select, or be assigned, an exposure event of significance. Over the course of the semester, it is your responsibility to learn everything you can about this event. Each student in the group will receive a grade for their individual contribution (150 points) and a combined group grade (50 points). It is perfectly permissible for students to offer assistance to others in their group in completing the group project, if such help is desired.

For each unique event selected, I will provide a list of core citations that will inform the group's research that all group members must read and insure the information from 2-4 of the assigned readings is incorporated in their presentation. You may use Wikipedia to read a summary of the event and to identify additional legitimate sources of information; search engines are also appropriate.

Be creative! PowerPoint is fine; video is great, appropriate music may help better convey your information to the class. You want to engage the class in understanding the impact of your event within a time limit of ten (10) minutes. To stay within time guidelines, you may want to record any narration as part of the slideshow or video presentation. If you present live or in real time, you must use a script timed to stay within the limitations. Make a good tight presentation that succinctly covers the Research Outline.

<http://www.wondershare.com/slideshow/video-slideshow-maker.html>

Each student will agree to fill a role in the project. These roles must be confirmed with the instructor by 1/17 (3rd class).

Project Research Roles

1. **RESEARCH 1.** You will research, write-up, and report findings to the group on the first 3 elements described in the Research Outline. Your write-up will be submitted for your individual grade.
2. **RESEARCH 2.** You will research, write-up, and report findings to the group on elements 4-6 described in the Research Outline. Your write-up will be submitted for your individual grade.
3. **VISUAL PRESENTATION.** Prepare visuals for the multimedia presentation. You **MUST** work with Research 1 & 2 to clearly portray the information they have assembled. You will be graded on the accuracy and information relayed in the visual depiction of the event. Risk communication is a critical aspect to making environmental health accessible to a wider audience.
4. **TEXT/AUDIO PRESENTATION.** Prepare text and audio for the multimedia presentation. You will work closely with Research 1 & 2 and the Visual group member to effectively communicate the story of the event and the issues involved. You will be expected to answer questions on all aspects of the project, so it is imperative that you trust and understand the information assembled by Research 1&2.
5. **PRINT MEDIA.** Summarize research on the environmental disaster in a one-page handout for the class using the format provided (*Background, Agent, Population, Initial Response, Sequelae, Outcome*). Your product needs to clearly cover the important facts of your groups project. The rest of the class will ask questions about your topic and use your handout to study for the Final. Make sure you pick out the critical facts and that your facts agree with the rest of the group's production.

Research Outline

1. **Background.** When and where did the event occur? Describe the culture, geography, and society in which the event took place.
2. **Agent.** What was the nature of the environmental toxicant? Describe the state of the toxicant (gas, particulate, liquid), its intended use or origin, known and unknown (at the time) health effects, dose, current and contemporary exposure limits and/or regulations.
3. **Population.** Who was exposed? Describe the exposed population (human and animal), mechanism of exposure, duration of initial exposure and any delayed or extended exposure issues, and mortality/morbidity of exposure event.
4. **Initial Response.** Who responded to the event? Which environmental professionals were involved in the response? Were laws or regulations in place at the time of the event that guided the response? How long did it take for the initial response and how long was required to address the totality of the event?
5. **Sequelae.** What changed after the event? Were regulations rewritten? Were there lawsuits? Were prospective environmental epidemiology studies associated with the event? What were the findings? What else changed?
6. **Outcome.** How does this event impact our society today? Are there examples of this hazard still to be found globally? Do you see corporations making efforts to control this hazard? Explain. Is there a social or economic cost associated with this?

PROJECT GRADING RUBRIC		
Element	Criteria for a Superior Grade	Points
Research 1	<p>No spelling or grammar errors Scientifically correct inferences Rigorous explanation of event background Rigorous explanation of toxic agent Rigorous discussion on population affected Concepts covered in this course are evidently integrated into the answers Uses at least 4 of the most pertinent and current sources of information Must include 1 citation from a notable occupational & environmental journal ≥ 3 pages of text double-spaced, Arial 12 font, 1"inch margins all sides APA citation format</p>	150
Research 2	<p>Rigorous explanation of genetic risk Rigorous explanation of physiologic risk Rigorous explanation of psychosocial risks Concepts covered in this course are evidently integrated into the text No spelling or grammar errors Scientifically correct inferences Uses at least 4 of the most pertinent and current sources of information Must include 1 citation from a notable occupational & environmental journal ≥ 3 pages of text double-spaced, Arial 12 font, 1"inch margins all sides APA citation format</p>	150
Visual Presentation	<p>Photos or video are of high quality and necessary to the storyline Photos/video flow smoothly from one to the next Text font and spacing is easy-to-read Graphics are interesting and appropriate with the use of vibrant, engaging color Number of photos/video are adequate for the length of the presentation</p>	150
Text/Audio Presentation	<p>Information presented in a logical and interesting sequence No misspellings or grammatical errors Beginning grabs the viewer, body of the text moves the story through to end Music/audio choice & volume enhance the video Text is clear, uncluttered, and easy to read</p>	150
Print Media	<p>Background, Agent, Population, Initial Response, Sequelae, and Outcome No spelling or grammar errors Scientifically correct inferences Communication language < 9th grade level Appropriate graphics, uncluttered, easy to read, 1 page in length</p>	150
Combined Group Grade	<p>Presentation is complete in <10 minutes All required research is included in the presentation demonstrating full knowledge of the event Presentation is engaging, catches the interest of class Professional looking 1-page handout</p>	50

FINAL EXAM (250 points total)

The final exam is will cover content, including lectures and required readings, from the midterm to the end of class. Same as the midterm, review of the correct answers to study questions and exercises will be highly beneficial to your mastery of the material. There may be additional questions on film or student presentation content.

Course Policies

1. ATTENDANCE. Forty percent (40%) of the grade in this class is tied to assignments due at the beginning of class or assignments done in class. Needless to say, regular attendance is critical to your success. Some absences are unavoidable. The University (S.R. 5.2.4.2) defines the following as acceptable reasons for excused absences: (a) serious illness; (b) illness or death of family member; (c) University-related trips; (d) major religious holidays; (e) other circumstances I find to be "reasonable cause for nonattendance". For reasons (a) and (b), it is your responsibility to inform me of your absence preferably in advance, but no later than 1 week after it. For reasons (c) – (e), I expect to be notified at least 2 weeks in advance of a planned

excused absence. When there is an excused absence, I will give you the opportunity to make up missed work and/or exams. Students are expected to withdraw from the course if more than 20% of the classes scheduled for the semester are missed and unexcused per university policy.

2. PARTICIPATION. Be in the classroom and prepared to participate in class at the scheduled starting time for each session. Actively participate in the discussions. This is not the type of class where you can “sit back and listen.” Texting or sleeping during class is inappropriate.

Cell phones should be silenced. Suspend email and texting and phone calling during class. Should a true emergency arise that you must address, please quietly attend to it and return to class as quickly as possible.

Provide honest and timely feedback regarding the content and process of this course throughout the semester. Share in the responsibility for making this course an enjoyable and beneficial learning experience.

3. CLASS ASSIGNMENTS. Submit written assignments using proper English grammar, syntax, and spelling. You are encouraged to use spell check and grammar check prior to submitting your written work. The Writing Laboratory is available to anyone who may need assistance. Wikipedia cannot be used as a cited reference as noted by a co-founder of Wikipedia! You may use Wikipedia to identify appropriate source material. Remember Wikipedia is not peer reviewed!

4. LATE WORK POLICY. If you know your athletic- or club-scheduled absences at the beginning of the semester, you must provide me with that information during the first class. You should inform me at least 2 weeks before religious observances and other planned excused absence during the semester. If you have an unplanned absence due to injury, illness or other situation beyond your control, you must email me with a valid, documented excuse within 1 week of that absence.

In either case, I will provide you with the week’s powerpoint, assistance with discussion questions and other links. Depending on circumstances, I may allow you to submit your written study questions at a later date. If you do not notify me within these parameters of a planned or unplanned absence, I will not provide any information to you nor will I accept your written assignment for the week.

5. CLASSROOM BEHAVIOR. Respect for other’s opinions and civility is expected of all students and lecturers in the course. Students have the right to voice their opinions and may take reasoned exception to opinions according to university policy (S.R. 6.1.2). Incivility is never appropriate. Obviously, the accepted level of civility will not include attacks of a personal nature or statements denigrating another on the basis of race, sex, religion, sexual orientation, age, national/regional origin or other such irrelevant factors.

6. ACADEMIC INTEGRITY. Per university policy, students shall not plagiarize, cheat, or falsify or misuse academic records. Students are expected to adhere to University policy on cheating and plagiarism in all courses. The minimum penalty for a first offense is a zero on the assignment on which the offense occurred. If the offense is considered severe or the student has other academic offenses on their record, more serious penalties, up to suspension from the university may be imposed.

Plagiarism and cheating are serious breaches of academic conduct. Each student is advised to become familiar with the various forms of academic dishonesty as explained in the Code of Student Rights and Responsibilities. Complete information can be found at the following

website: <http://www.uky.edu/Ombud>. A plea of ignorance is not acceptable as a defense against the charge of academic dishonesty. It is important that you review this information as all ideas borrowed from others need to be properly credited.

Part II of *Student Rights and Responsibilities* states that all academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. In cases where students feel unsure about the question of plagiarism involving their own work, they are obliged to consult their instructors on the matter before submission. (available online <http://www.uky.edu/StudentAffairs/Code/part2.html>)

When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording or anything else from another source without appropriate acknowledgement of the fact, the students are guilty of plagiarism. Plagiarism includes reproducing someone else's work, whether it be a published article, chapter of a book, a paper from a friend or some file, or something similar to this. Plagiarism also includes the practice of employing or allowing another person to alter or revise the work which a student submits as his/her own, whoever that other person may be.

Students may discuss assignments among themselves or with an instructor or tutor, but when the actual work is done, it must be done by the student, and the student alone. When a student's assignment involves research in outside sources of information, the student must carefully acknowledge exactly what, where and how he/she employed them. If the words of someone else are used, the student must put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization, content and phraseology intact is plagiaristic. However, nothing in these Rules shall apply to those ideas which are so generally and freely circulated as to be a part of the public domain (Section 6.3.1).

Please note: Any assignment you turn in may be submitted to an electronic database to check for plagiarism.

7. ACADEMIC ACCOMMODATIONS DUE TO DISABILITY. If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, submit to me a Letter of Accommodation from the Disability Resource Center). If you have not already done so, please register with the Disability Resource Center for coordination of campus disability services available to students with disabilities. Contact Jake Karnes via email at jkarnes@email.uky.edu or by telephone 859-257-2754. You may also visit the DRC website for information on how to register for services as a student with a disability: <http://www.uky.edu/StudentAffairs/DisabilityResourceCenter/>

8. RELIGIOUS OBSERVANCES. Students will be given the opportunity to make up work (typically, exams or assignments) when students notify their instructor that religious observances prevent the student from completing assignments according to deadlines stated in this syllabus. Students must notify the course instructor at least two weeks prior to such an absence and propose how to make up the missed academic work.

9. INCLEMENT WEATHER. The University of Kentucky has a detailed policy for decisions to close in inclement weather. The snow policy is described in detail at http://www.uky.edu/PR/News/severe_weather.htm or you can call (859) 257-1754.

CPH 320 Class Schedule – Fundamentals of Environmental Health, Fall 2013

Week	Date	Lecture Topic	Assignment	Textbook
1	1/10	Introduction to the class & review of syllabus Major class project review		
2	1/15	Introduction: The Environment at Risk	Project assignments defined	Ch 1
	1/17	Environmental Epidemiology, pt 1	Study questions 1 due	
3	1/22	Environmental Epidemiology, pt 2		Ch 2
	1/24	"Anatomy of a Pandemic" documentary shown	Study questions 2 due Documentary review due	
	1/29	Environmental Toxicology		Ch 3
4	1/31	Occupational Health	Study questions 3 due	Ch 13
	1/31	Injuries, Unintentional Injuries, & Deaths	Study questions 13 due	Ch 14
5	2/5	"Trade Secrets" documentary shown	Study questions 14 due Documentary review due	
	2/7	Env. & Occupational Policy & Regulation		Ch 4
6	2/12	Zoonotic & Vector-borne disease	Study questions 4 due	Ch 5
	2/14	"Ebola, the Plague Fighters" documentary shown	Study questions 5 due Documentary review due	
7	2/19	Toxic Metals & Elements		Ch 6
	2/21	Pesticides & Other Organic Chemicals	Study questions 6 due	
8	2/26	"Gasland" documentaries shown "Truthland"	Study questions 7 due Documentary review due	Ch 7
	2/27	MIDTERM		
9	3/5	Ionizing & Non-Ionizing Radiation	Midterm returned	Ch 8
	3/7	"Inside Japan's Nuclear Meltdown" documentary shown	Study questions 8 due Documentary review due	
		SPRING BREAK		
10	3/19	Water Quality		Ch 9
	3/21	Mercury: Cleaner Air & Water on the Fly (in-class laboratory exercise)	Study questions 9 due In-class assignment due	
11	3/26	Air Quality		Ch 10
	3/28	Death by Particles: CHD in Women Env. Cardiology: Tables & Figures (in-class exercise)	Study questions 10 due In-class assignment due	
12	4/2	Food Safety		Ch 11
	4/4	"Modern Meat" documentary shown	Study questions 11 due Documentary review due	
13	4/9	Solid & Liquid Wastes		Ch 12
	4/11	Computer Lab	Study questions 12 due	
14	4/16	CLASS PRESENTATIONS		
	4/18	CLASS PRESENTATIONS		
15	4/23	Panel discussion on environmental careers	DEAD WEEK	
	4/25	Review for the final exam	DEAD WEEK	
16	5/2	Final Exam at 8:00 AM		