**Syllabus: Spring 2018**

**HP446: People, Poisons, and Politics**

(Environmental Health Policy)

**Course Instructor:** Ed Avol

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**Time:**  2 pm to 3:20pm

**Location:**  THH116

**Office Hours:** Tuesdays and Thursdays, 0730am to 1015am,

Tutor Campus Center (TCC) Family Room;

Other Days and Hours by Appointment

**COURSE DESCRIPTION**

This course will consider how decisions are made to regulate occupational health (OH) and environmental health (EH) risks when such policy decisions involve scientific, policy, political, economic and technological issues. An important aspect of the course will be assessing how regulators integrate science into public policy. Students will examine the various interests that play a role in adopting EH policies and barriers to change, including the roles of government, industry, and non-governmental organizations. Students will review, present, and discuss case studies in the scientific and popular literature describing current and past attacks on science by special interest groups and the importance of transparency and independence in publishing research findings.

**GOALS**

The goal of this course is to acquaint students with EH and OH policies and regulations in a manner that allows them to critically evaluate the methods involved in policy/regulation development. The role of various entities in influencing and implementing those policies, with a focus on the need to protect the integrity of science against special interest groups, will also be a primary goal of the course.

**LEARNING OBJECTIVES**

By the end of this course, students should be able to:

• Articulate how different research methods, e.g., epidemiologic and toxicologic studies, are employed to identify and characterize human health risk.

• Describe several methods of how exposure is assessed.

• Describe examples of environmental health (EH) and occupational health (OH) policies and the steps in creating them.

• Describe the major U.S. environmental laws, regulations, and government agencies involved in implementing EH and OH policies.

• Understand the role of science and “weight of the evidence” in risk assessment and decision-making for EH and OH policies, and application of the “precautionary principle”

• Articulate the role of journalists both today and historically in raising alarms about health threats.

• Develop an understanding of the role of labor, community, business and trade associations or public health organizations in the adoption of regulations, policies or standards.

• Describe several case studies related to environmental risks and policy solutions to address the risks and attempts by special interest groups to slow down or derail the efforts.

• Articulate some principles involved in protecting science against attack by special interests and the difference between honest and distorted science, including the publication guidelines of various scientific journals aimed at finding conflicts-of-interest.

• Articulate the current directions and challenges for regulatory agencies in the U.S.

**COURSE COMPONENTS**

This course will involve several inter-related components that together provide a general introduction to the skills and topics needed to develop a broad public health understanding.

***1.*** ***Class Meetings***

Each class meeting will generate and involve lively discussion among and between students and instructors on the issues being presented. This classroom atmosphere is decidedly a participatory activity, NOT a passive presence. Students are expected to regularly participate, exchange ideas, debate their opinions, and reach improved levels of understanding.

Class meetings will be organized in a variety of formats – lectures, debates, videos, hands-on activities – to stimulate the thinking and engagement of the students. Classes will typically be overseen by the course instructor, augmented by occasional guest lecturers to provide added expertise in specific topic areas. Lecture slides will generally be posted on the course Blackboard website following each lecture, to encourage student attention and daily participation during class meetings.

Periodic class quizzes (in the first ten minutes of class time) on course material and homework assignment reviews will be a routine part of in-class activities. Quizzes are used to encourage prompt class attendance, identify how effective previous class lectures have been in conveying course content, and to encourage completion of assigned reading or video viewing prior to class. Students cannot make-up missed quizzes; they are a one-time in-class-only opportunity.

***2. Content Lectures***

The course instructor will provide lecture/background slides for most class lectures on the respective topic to be considered. PowerPoint-type slides will usually be prepared and presented, augmented by assigned readings or videos. This will be done to provide insights and perspectives on the material and to motivate classroom discussion. Lectures should be seen as a launch point for discussion, not as an endpoint in and of itself. Typically, lecture slides will be posted following a class presentation. It is strongly encouraged that students review the recommended reading materials and video viewings prior to class, so that they may participate meaningfully in classroom discussions on the day of presentation. Questions, comments, insights, and personal experiences are always welcomed and encouraged.

***3. Policy Newsbreaks***

Students will sequentially have a scheduled opportunity, typically at the beginning of class throughout the semester, to prepare and present a five-minute oral presentation on some environmental or occupational policy issue they have identified in current or recent news. Topics can be selected from any credible (and documentable) web-based source of information that piques student interest. A slide presentation is helpful to facilitate the brief presentation, which should include a description of the issue, the policy involved, the population affected (including potential health impacts), what’s being done (or what happened), lessons to be learned from this, and a list of sources, references, and citations. Each presentation should be provided electronically to the course instructor at least one hour prior to the beginning of class.

**COURSE READING RESOURCES**

There is no single required text for the course, but several useful resources are available, including “Environmental Health Perspectives” (the journal of the National Institute of Environmental Health Sciences), “Yale Environment 360” (a publication of the Yale School of Forestry and Environmental Studires), and “Above the Fold” (a publication of Environmental Health News). Each of these are popular websties and journals devoted to environmental health topics. Peer-reviewed published journal articles, readings, and resources will also be provided, posted, and suggested throughout the course for student access.

**Course Syllabus:** The current course syllabus is posted on the Blackboard course website. Periodically during the semester, the course syllabus will be updated and re-posted on Blackboard. When this occurs, students will be notified in class. Students should check the course Blackboard site regularly to be aware of the most current course syllabus. Additional preparatory or learning materials may also be identified and/or distributed in class.

**ATTENDANCE POLICY**

Students are expected to attend every class and for the duration of the class. Failure to attend class, arriving late or lack of active participation may impact your ability to achieve course objectives which could affect your course grade. Students are expected to notify the instructor by email of any anticipated absence or reason for tardiness.

University of Southern California policy permits students to be excused from class, without penalty, for the observance of religious holy days. This policy also covers scheduled final examinations which conflict with students' observance of a holy day. Students must make arrangements in advance to complete class work which will be missed, or to reschedule an examination, due to holy days observance. Please refer to *Scampus* on attendance policies. In consideration of classmates and the instructor, students are asked to keep external distractions that might interfere with class to a minimum.

**Course Grading:** Students will earn grades based on the following criteria:

|  |  |
| --- | --- |
| ***COURSE COMPONENT*** | ***PERCENT OF OVERALL GRADE*** |
| In-Classroom Participation | 10% |
| In-Class Quizzes | 10% |
| Assigned Homework | 10% |
| Individual Oral Presentations | 10% |
| Mid-Term Examination | 20% |
| Group Project/Presentation | 20% |
| Final Examination | 20% |
| **Total** | **100%** |

The final grading scale for the course will be as follows:

A+     97-100 B+     87-89 C+     77-79 D 61-69

A       93-96 B       83-86 C       73-76           F 0 - 60

A-      90-92 B-      80-82 C-      70-72

Please note that an A+ carries the same weight (4.0) as an A.

**In-Class Participation (10%)**

Students are expected to contribute to the development of a positive learning environment and to demonstrate their learning through written and oral assignments and through active class participation. Class participation should consist of meaningful, thoughtful, and respectful participation based on having completed required readings and assignments prior to class. When in class, students should demonstrate their understanding of the material and be prepared to offer comments or reflections about the material, or alternatively, to have a set of thoughtful questions about the material. Failure to meet these expectations will result in possible grade reduction.

**In-Class Quizzes (10%)**

Short quizzes, typically of three to four questions, will occasionally be given at the beginning of class, to assess learning comprehension, confirm assigned readings or video viewings have taken place, and to complement course learning. These will occur on approximately a weekly basis. Quizzes cannot be taken at a later date and are only offered at the class time; students should therefore make every effort to be present for the complete course lecture time.

**Assigned Homework (10%)**

Periodic homework assignments will be used to provide additional learning opportunities for students. Assignments will be announced in class and posted on Blackboard, and typically be electronically due to the Instructor prior to the beginning of the next class meeting.

**Individual Oral Presentations (10%)**

In the course of the semester, every student will be expected to present a brief oral presentation to the class on something relevant to Environmental Health Policy of their own interest and choosing. This is an opportunity to work on public speaking skills (including articulate speaking, audience focus, an organized presentation, logical discussion points, informative slides or video (if used), conformance to time limitations, thoughtful questions for additional discussion) and to learn about something of personal interest. Voluntary signups will be taken on a rolling basis for presentation throughout the semester.

**Examinations (One Mid-Term and one Final, each worth 20%)**

In-class testing will be used to assess the understanding of course topics and discussions by students. A mid-term and a final examination will be given, announced in advance, and/or per the official testing schedule. Testing will be ‘closed-book”. Test format may include short answers, True/False, multiple choice, short essays, and fill-in type questions. Exams will be administered “old-school” – bring a pencil or pen to class, and the Instructor will provide each student an exam for completion and return by the end of the test period.

**Group Project (20%)Each item will be scored 0-10 and a grade will be assigned, based on a weighted average: A=use criteria in grading manual….**

The Group Project will consist of a classroom presentation of twenty (20) minutes’ duration. Presentation of a student-selected topic of environmental health relevance will be made using Powerpoint, video, social media, or some audiovisual interactive approach. This might include a slide presentation, an original game, a play, poem, rap, or artwork, Students will be required to work in sub-groups of approximately three students to develop final class projects. Groups and project topics must be approved in advance by the Instructor. Projects will be presented in class during the last weeks near the end of the semester. The group presentation date must be scheduled in advance with the course instructor. A maximum of three group presentations may be scheduled for any given date. Only one Group Project is permitted per student.

The group presentation will inform, educate, and engage classroom peers on the issues, status, affected populations, alternative solutions, and potential resolution of the identified environmental health policy. In general, each project presentation will include a literature review of available information to frame the matter being presented, a clear and concise presentation of the issue, an assessment about the size and/or nature of the affected population, a critical review of possible alternative responses, a recommendation for action, and an informed estimation of possible outcomes. Student project presentations will be followed by a “question-and-answer” period involving the group, the class, and the instructor. This will be done to clarify presented issues and assess understanding of the topics covered. Each individual member of the joint project team must actively and proportionally participate in the preparation *and* presentation of the project. Each student will be graded on the proportional merits of their contributions, as well as on the synergistic coherence of the combined group presentation. Each member of the joint project team should provide the Course Instructor with a one-to-two paragraph summary of their specific contribution to the overall project.

**Extra-Credit**

Each student is eligible to submit up to two extra-credit assignments over the course of the semester. These can be used to offset less-than-optimal performance on a quiz, or to help provide additional evidence of student competence in the course topic area. Examples of acceptable extra-credit efforts include (but are not limited to):

1. attending a public hearing, seminar, or workshop on a topic relevant to Environmental Health Policy, and then submitting a brief written report about the experience;
2. viewing a documentary or video on a relevant Environmental Health Policy topic and writing a brief report about the video and lessons learned.

Reports need only be a few pages (1-2) in length. Extra-credit efforts will be accepted until the last day of classes. After this date, no extra-credit opportunities or efforts will be accepted.

**Late or Make-Up Work** will be accepted if and only if an extension request has been submitted to the Instructor and if that request has been approved. Otherwise, papers, homework and presentations are due on the day and time specified. Extensions will be granted only for extenuating circumstances. If the submission is late without permission, the grade will be affected. Quizzes are administered at the beginning of selected class lectures and cannot be “made up” at a later date – students must be present in class at the time the quiz is provided to earn credit on a given quiz.

**Classroom Distractions** detract from both the learning environment and from making the best use of limited class time together.Do not take class time to peruse the student newspaper or do homework from other classes. Cell phones/pagers/loud electronic devices should be turned off or set to “vibrate” during class time. Electronic devices (laptops, tablets, iPads, etc) may be used to take notes during class, at the discretion of the instructor. Failure to comply with these simple and basic rules of classroom etiquette can adversely affect semester course grades.

**Academic Misconduct**

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences.  Please familiarize yourself with the discussion of plagiarism in *SCampus* in Section 11, *Behavior Violating University Standards*<https://scampus.usc.edu/1100-behavior-violating-university-standards-and-appropriate-sanctions/>.  Other forms of academic dishonesty are equally unacceptable.  See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct/>.

Discrimination, sexual assault, and harassment are not tolerated by the university.  You are encouraged to report any incidents to the *Office of Equity and Diversity* <http://equity.usc.edu/> or to the *Department of Public Safety* <http://capsnet.usc.edu/department/department-public-safety/online-forms/contact-us>.  This is important for the safety whole USC community.  Another member of the university community – such as a friend, classmate, advisor, or faculty member – can help initiate the report, or can initiate the report on behalf of another person.  *The Center for Women and Men* <http://www.usc.edu/student-affairs/cwm/> provides 24/7 confidential support, and the sexual assault resource center webpage [sarc@usc.edu](mailto:sarc@usc.edu) describes reporting options and other resources.

**Support Systems**

A number of USC’s schools provide support for students who need help with scholarly writing.  Check with your advisor or program staff to find out more.  Students whose primary language is not English should check with the *American Language Institute* <http://dornsife.usc.edu/ali>, which sponsors courses and workshops specifically for international graduate students.  *The Office of Disability Services and Programs* <http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html>provides certification for students with disabilities and helps arrange the relevant accommodations.  If an officially  declared emergency makes travel to campus infeasible, *USC Emergency Information* <http://emergency.usc.edu/>will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.

**Course Lectures and Readings:** (this portion of the syllabus will be periodically updated, to reflect class opportunities, class feedback, and special events, so check back regularly):

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| --- | --- | --- | --- | --- | --- |
| Wk | Class | Date | Topic | Speaker | Readings |
| 1 | 1 | 09 Jan | Intro & Overview | Avol | (none)  HW1 Assigned |
|  | 2 | 11 Jan | Key Concepts in Environmental Health | Avol | HW1 Due  Careers in Environmental Health <http://www.youtube.com/watch?v=qVc38zRk9M8>;  **Reading:** Howard Frumkin (Ed.), Environmental Health: From Global to Local, Introduction, pp XXIX to L; (posted on Blackboard) |
| 2 | 3 | 16 Jan | Occupational Health & Work Policy | Avol | **Video to watch**: on Occupational Health:  “Can’t Take It No More”, (29 min video), at <http://www.youtube.com/watch?v=13gzGkQtVzg>  Silicosis & The Politics of Science, 1935 to1990, Markowitz & Rosner , 1995 (posted on Blackboard);  (Silicosis in 2015): <http://www.theguardian.com/science/political-science/2015/jul/15/ground-to-dust-fracking-silicosis-and-the-politics-of-public-health>  HW2 Assigned |
|  | 4 | 18 Jan | Things We do to Workers & Why | Avol & Students | HW2 Due  (worker-related exposures raising issues of policy)  Black Lung Returns to Appalachia (posted on Blackboard) |
| 3 | 5 | 23 Jan | Distorting the Truth: From Bradford-Hill to “Bending Science” |  | Why Believe in Science? <http://www.ted.com/talks/naomi_oreskes_why_we_should_believe_in_science>  Bradford-Hill’s original comments: <http://www.edwardtufte.com/tufte/hill>;  Rosner & Markowitz, Lead & Public Health, Am J of Pub Health, 2000; (posted on Blackboard) |
|  | 6 | 25 Jan | Big Tobacco’s CV (Cigarettes to Vaping) | Avol | Tobacco Industry Manipulation of Research, Lisa Bero, EEU, posted on Blackboard, or go to <http://www.eea.europa.eu/publications/late-lessons-2> & scroll down to “Lessons Learned II Chapter 7: Tobacco  HW3 Assigned |
| 4 | 7 | 30 Jan |  | TBN | HW3 Due |
|  | 8 | 01 Feb | Water Wars: Getting Water for Los Angeles | Avol | (William Mulholland, ~10min video) <https://www.youtube.com/watch?v=hNqbp-L-Lrg>;  “Water for the City”, Chapter 3 (40pp), Robert Gottleib, *Reinventing Los Angeles: nature and community in the global city*, MIT Press (2008), posted on Blackboard  HW4 Assigned |
| 5 | 9 | 06 Feb | Flint MI: A Water & Social Policy Saga | Avol & Students | HW4 Due  <https://www.ted.com/talks/siddhartha_roy_science_in_service_to_the_public_good> |
|  | 10 | 08 Feb | The Search for Clean Air | TBD | HW5 Assigned |
| 6 | 11 | 13 Feb | The Clean Air Act: VW & Other Impossibilities | Avol & Students | HW5 Due  Diesels in Europe, 2015EHP (posted in Blackboard)  HW6 Assigned |
|  | 12 | 15 Feb | US Energy, in a Trump-Led Future | Avol | HW6 Due  <https://www.bostonglobe.com/ideas/2014/09/13/energy-what-americans-really-want/SdM914A5hoIK4rKP2rKn3O/story.html>  HW7 Assigned |
| 7 | 13 | 20 Feb | Class Debate: Making the EPA Great Again | Avol | HW7 Due |
|  | 14 | 22 Feb | In Our Own Backyard: Sustainability at USC | Darren Ruddell | HW8 Assigned |
| 8 | 15 | 27 Feb | Food: You Are What You Eat | Avol | HW8 Due |
|  | 16 | 01Mar | Pesticides & World Health | Avol | (Pesticides Use & Exposure Worldwide) <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2946087/>;  (The Pesticide Industry vs. Consumers), <http://www.thenation.com/article/pesticide-industry-vs-consumers-not-fair-fight/>;   (A Political Battle over Pesticides) <http://www.the-scientist.com/?articles.view/articleNo/35058/title/A-Political-Battle-Over-Pesticides/> |
| 9 | 17 | 06 Mar | GM Food | Avol | <https://www.ted.com/talks/pamela_ronald_the_case_for_engineering_our_food?language=en#t-68574> |
|  | 18 | 08 Mar | Mid-Term | Avol |  |
| 10 |  | 13 Mar | SPRING BREAK | -- | SPRING BREAK  (NO CLASSES) |
|  |  | 15 Mar | SPRING BREAK | -- | SPRING BREAK  (NO CLASSES) |
| 11 | 19 | 20 Mar | While You Were Gone (11 Days, 11 EH Issues) | Avol & Students | HW9 Assigned |
|  | 20 | 22 Mar | Transportation Policy: Driving to a cleaner future | Avol & Students | HW9 Due  <https://www.publicintegrity.org/2017/02/17/20716/invisible-hazard-afflicting-thousands-schools>  HW10 Assigned |
| 12 | 21 | 27 Mar | Let’s Go to the Movies! | TBN | HW10 Due  Movie/Discussion of Environmental Movies  HW11 Assigned |
|  | 22 | 29 Mar | WTF? Climate Change, Pipelines, & Environmental Protection | Avol | HW11 Due |
| 13 | 23 | 03 Apr | Vaccinations & Public Health Policy | Avol | <http://www.ncsl.org/research/health/immunizations-policy-issues-overview.aspx>  <http://blogs.plos.org/scied/2017/01/05/what-can-the-anti-vaccination-movement-teach-us-about-improving-the-publics-understanding-of-science/>  <http://www.pbs.org/wgbh/frontline/article/jenny-mccarthy-were-not-an-anti-vaccine-movement-were-pro-safe-vaccine/>  (SEE SCIENCE APR2017 ARTICLES) |
|  |  | 05 Apr | Public Sanitation: Why is this still a thing? | Avol | <https://www.ted.com/talks/myriam_sidibe_the_simple_power_of_hand_washing>;  <http://www.alternet.org/newsandviews/article/513841/outrage%3A_people_in_the_us_still_lack_access_to_clean_water> ;  <http://www.huffingtonpost.com/entry/flint-lead-poisoning-philadelphia-newark-chicago_us_57030bcce4b0a06d5806b787> |
| 14 |  | 10 Apr | Chemicals In & Amongst Us: Who’s Watching? | Avol | <https://theintercept.com/2016/03/03/how-dupont-concealed-the-dangers-of-the-new-teflon-toxin/?comments=1#comments>  HW12 Assigned |
|  | 24 | 12 Apr | Student Projects | Students | Student presentations |
| 15 | 25 | 17 Apr | Role Play: Community Hearings & Health Concerns | Avol & Students | HW12 Due |
|  |  | 19 Apr | Earth Day Discussions; Student Projects | Avol; Students | Earth Day Teach-In! |
| 16 | 26 | 24 Apr | Student Projects | Students | Student presentations |
|  | 27 | 26 Apr | Student Projects: Course Wrap-Up | Avol; Students |  |

**USC Scheduled Time for Class Final: Thurs May 3, 2-4pm**