The Evergreen State College
Master of Public Administration Program
Science Policy to Action
Fall Quarter 2016, 2 credits
Dr. Katherine Himes, Adjunct Faculty

Important Information

Meeting Room: Seminar II, D2109
Course Time: November 4-6; Friday 17:00-21:00, Saturday 9:00-17:00, Sunday 9:00-17:00
Email: Students may contact me with questions before the course begins at himesk@evergreen.edu

Course Description

Imagine sitting at "the table," negotiating science policy with international leaders. Or, researching and drafting a new invasive species law at the governor's request. This course provides an introduction to science policy, with the goal of translating concepts into implementable action. We will study the actors in the science policy arena; analyze how the United States and international political institutions and processes govern science policy; and experience the roles of scientists and policymakers in creating and implementing policies through case studies covering a wide range of policy areas (e.g., water, health, climate, energy, environment). We also will explore how agencies, legislatures, and courts resolve resource-use conflicts, and the role of scientific information and uncertainty in this process. Background readings and in-class case studies focused on reaching a policy objective will prepare students for authoring a policy memo, and applying these skills to professional experiences. Science policy will come alive!

Course readings come from historical White House Reports, technical journal articles, popular media, and policy briefing documents. Each reading (and one film) is listed next to the relevant topic in the Schedule and Required Reading section of the syllabus. Teaching format includes short lectures, small and large group discussions, case studies, response writings, and student presentations.

This is an intensive class: we will compress a full quarter of work into a short time frame. Please plan accordingly to be sure you can attend each day and meet the necessary deadlines. Please read the entire syllabus. Thank you!

An assignment due is due at the start of the class. Detailed instructions will be delivered to enrolled students at the beginning of Fall Quarter. You are responsible for checking your official campus email address.

Learning Goals and Objectives

Learning Goals: After completing this course, students will

- Understand interactions between science and policy

- Appreciate the history of science policy
- Enhance discussion and presentation skills
- Comprehend the future of science policy
- Own a toolkit of science policy resources, cultivated by individual participation through the course, and complemented by links and organizations provided by the faculty

Learning Objectives: Through this course, students will

- Develop a multidisciplinary toolkit to bring science policy to action
- Grow skills to influence science policy
- Develop expertise in conducting and presenting policy analysis
- Conduct independent research leading to a presentation as well as a policy brief

This course is designed for graduate students from diverse backgrounds. No scientific or technical background is necessary. A basic understanding of the concepts of American government is very helpful, but not required. This is an introductory science policy course, and encompasses a broad range of content. Many aspects of science policy will be covered, but the course will not go into great depth into any of these.

Your ability to translate science policy into action is proportional to what you put into this course. To get the most out of this elective, students will need to complete all the readings, come to class prepared, participate actively, and complete all assignments. Written assignments are to be submitted in hard copy.

The course is a seminar. Each themed section includes short lectures to introduce topics, followed by either a small group exercise or case study designed to reinforce the topic, and make science policy come alive. Information flow will be multidirectional, with everyone in the class sharing information, experiences, and insights.

A few points:

- Deadlines are to be met without exception.
- In-class discussions may be vigorous, but must be courteous and respectful.
- Students should tolerate ambiguity. Policy issues rarely are black-and-white, and many approaches to policy questions translate to effective results.
- While the reading list may seem lengthy, most articles are short (2-4 pages). The exception is the White House Report.

Methods of Evaluation

The written evaluation will include:

1. **Class Participation:** Class participation will be assessed through discussion of assigned readings, short response writings, and case study involvement. Specifically, participation will be evaluated for relevance and insight of comments. Quality, not quantity, will be emphasized.

2. **Science Policy Brief:** Each student will write an original, one-page, succinct science policy brief focused on a particular topic. While the topic will be your choice, you should select one with which you have no previous background. The draft policy brief is due at the start of class, Friday, November 4, 2016. In-class exercises will provide feedback and insight into improvements to be integrated into the final version. Students will present a very brief summary of their memo during class. The final policy brief is due Monday, November 21, 2016. Both the written and oral forms of the brief will be included in the course evaluation.

   Specific details about the brief area listed in the Policy Brief section of the syllabus.

Schedule and Required Readings

Friday, November 4

Topic: Course Overview and Introductions
Assignment: Draft Science Policy Brief due at start of class

Topic: History of Science Policy in the U.S. (Post-World War II)
Required Reading: Bush, V (1945). Science – The Endless Frontier: A Report to the President by Vannevar Bush, Director of the Office of Scientific Research and Development, July 1945. U.S. Government Printing Office. https://www.nsf.gov/od/lpa/nsf50/vbush1945.htm

Small Group Activity: Visioning the U.S. Science Policy Landscape
In-Class Reading: Pielke, R (2010). "In Retrospect: Science – The Endless Frontier." *Nature.* 466: 922-923.

Topic: Current Actors in the Science Policy Landscape: The U.S. Government and Beyond

Saturday, November 5

Topic: How the U.S. and International Political Institutions and Processes Govern Science Policy

Case Study: The Long Road to Paris: COP21
Required Video: From the National Oceanic and Atmospheric Adminstration (NOAA) https://www.climate.gov/teaching/climate-youth-engagement/case-studies/window-paris-cop21

Required Reading: Cornwall W (2015). "As Paris Talks Open, Meet a Geoscientist Who Has Attended Every Major Climate Negotiation." *Science Blogs*. http://www.sciencemag.org/news/2015/11/paris-talks-open-meet-geoscientist-who-has-attended-every-major-climate-negotiation

Case Study: Energy in Central Asia

Required Reading: The World Bank Brief: Central Asia Energy-Water Development Program Program Folio. http://www.worldbank.org/content/dam/Worldbank/Brief/Europe%20and%20Central%20Asia/central-asia/CAEWDP-Brochure-140807-en.pdf

Topic: How Agencies, Legislatures, and Courts Resolve Resource-Use Conflicts
Required Reading: North et al. (2015). "Policy Insight: Reform Forest Fire Management." Science. 349: 1280-1281. https://nature.berkeley.edu/stephenslab/wp-content/uploads/2015/04/North-et-al.-Unknown-Reform-forest-fire-management.pdf

Case Study: The Colorado River
Required Readings: Howard, B (2014). "Historic 'Pulse Flow' Brings Water to Parched Colorado River Delta." *National Geographic* Online. http://news.nationalgeographic.com/news/2014/03/140322-colorado-river-delta-pulse-flow-morelos-dam-minute-319-water/

Kendy E (2015). Firsthand Scientific Impressions on the Colorado River Pulse Flow One Year Later. Raise the River Website. http://raisetheriver.org/the-colorado-river-delta-pulse-flow-1-year-later/

University of Florida (2016). A mixed response: Floodwaters return to the Colorado River but can release greenhouse gases**.** Phys.org Website. http://phys.org/news/2016-07-response-floodwaters-colorado-river-greenhouse.html

Small Group Activity: Preparation for scientist-policymaker presentations

Sunday, November 6

Topic: The Role of Scientific Information, Uncertainty, and Communication
Required Reading: Colglazier EW (2016). "The Art of Science Advice." Science & Diplomacy. Online advance publication; September 2016 printed volume. http://www.sciencediplomacy.org/editorial/2016/art-science-advice

Case Study: Mental Health: Designing a Policy for the Next U.S. President

Small Group Activity: Experience The Roles of Scientist and Policymaker: Creating and Implementing Policies
Each student presents their Science Policy Brief

Topic: Wrap-up and Closing

Monday, November 21

Assignment: Final one-page Science Policy Brief due

Science Policy Brief

The one-page science policy brief is to be written as if requested by a senior agency official for whom you might be working in the State Legislature, U.S. Congress, Executive Branch, Tribal Government, or International Governance. A written draft is due at the start of class Friday, November 4. During class on Saturday, November 5, each student will work in small, policy-scientist role-playing groups to enhance the brief. Students will present their brief to the class for two minutes on Sunday, November 6. This will be followed by approximately five minutes of questions from the class. The final brief is due Monday, November 21. Additional details, instructions, and examples will be emailed to enrolled students at the start of Fall Quarter.

The context: Your senior agency official has asked you to review, analyze, and provide guidance on a current issue with respect to its impact on one or more sectors of society. Please read the Briefing Directive ("Tasker") below, and provide one or more recommendations for your senior agency official. Please specify the senior agency official in your brief.

Briefing Directive: In government, new policies are continuously proposed as existing policies are reviewed. Please choose a foreign policy, national/global security, state-level, or international development issue with a significant natural, social science, or technology component for which you would recommend a change in policy or creation of a new policy. You are encouraged to choose a topic outside your area of expertise. Please explain what the policy is, why you chose it, and what changes you would recommend.

Sample topics include (but are not limited to):

a. Climate change
b. Nanotechnology
c. Food safety
d. Food security
e. Water supply/water quality
f. Biodiversity
g. Sustainable energy
h. Role of science capacity-building in the foreign aid agenda
i. Cloning
j. Biotechnology
k. Water security
l. Science diplomacy
m. Nonproliferation
n. Infectious disease
o. Mental health

Credit

Students will receive two (2) graduate credits at the completion of the quarter if all course requirements have been completed satisfactorily to meet the learning goals and objectives. No partial credit will be awarded. Incompletes may be offered on case-by-case basis. Refer to the MPA Student Handbook. Plagiarism (i.e., using other peoples' work as your own), failing to complete one or more assignments, completing more than one assignment late, or multiple absences may constitute denial of total credit. Students will be evaluated based upon their progress towards the learning goals and objectives, assessed from classroom and assignment performance. Students at risk of losing credit will receive written notification prior to the end of the quarter.

Electronic Devices

This class is participatory and the learning community depends upon student engagement. Electronic devices should not be used for anything other than for designated in-class activities. I will ask students to put away their devices, with the exception of note taking.

Multiculturalism & Diversity

Faculty and students will work toward integrating multiculturalism and diversity throughout learning in readings, lectures, case studies, individual assignments, and group activities.

Learning Styles

I will provide information in multiple learning formats: auditory, visual, etc. However, applications are limited to means appropriate for the classroom environment. Please contact me to discuss learning style options or personal challenges. Accommodations are provided for any student who desires them through a working relationship with TESC resources: Access Services, the Writing Center, and the Quantitative and Symbolic Reasoning Center. To request academic accommodations due to a disability, please contact the Office of Access Services for Students with Disabilities (360-867-6348 or 360-867-6364). Information about a disability or health condition will be regarded as confidential. Please refer to TESC's Students With Disabilities Policy: http://www.evergreen.edu/policies/policy/studentswithdisabilities

Other Expectations of Students and Faculty

This class will promote a cooperative, supportive atmosphere within the community; give everyone opportunity for self-reflection and expression; use high standards in analyzing readings and preparing briefs, lectures, and comments in seminar; handle disputes in a spirit of goodwill; respect differences; and address problems in the learning community directly with the individuals involved.

These guiding principles are followed:

- TESC Social Contract: http://www.evergreen.edu/about/social.htm
- TESC Student Conduct Code: http://www.evergreen.edu/committee/studentconduct/docs/OTS-4388.3finalOctober282011.pdf
- TESC Non-Discrimination Policies and Procedures: http://www.evergreen.edu/policies/policy/nondiscriminationpolicyandprocedure

Students are expected to support and contribute to a well-functioning MPA classroom learning community. Behavior that disrupts the learning community may be grounds for disciplinary action, up to and including dismissal from the MPA program.

Guest Policy

Guests are welcome to visit during class time with discretionary approval from course faculty in advance of the requested visit.

Inclement Weather

In the event of bad weather or emergencies, students should check with television, web pages, and radio stations for announcements of campus closures. Students can also call the main TESC campus line 360-867-6000 to get the latest news regarding a campus closure or delay. Since many students in the program travel from relatively distant locations, faculty may decide to cancel program meeting even if campus is open. If we do this, then we will send an all-program email by 3:00 pm. Please sign up to campus closing and emergency receive alerts: http://www.evergreen.edu/news/archive/2008/10/e2campus.htm