PPPA 6085 Section 10
Science & Public Policy
Summer 2021

Professor

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Course Description

This course centers on two related questions: What is the role of science in U.S. policymaking, and what is the role of Public Policy in the conduct of science? Intersections of science and American political and civil institutions and ideas will be analyzed through the lens of Public Policy and Public Administration theory and practice. Additional literature will include philosophical discussions of what exactly defines science, and what is its appropriate role in a pluralistic democracy. Hot-button issues like stem cells and climate change will be examined, but not as a focus. Instead, ideas such as the power of purse, the organizational structure of agencies, and society's varying expectations of the role of science will be discussed to highlight the complexities of what many people consider to be a straightforward area of study. Students should come away from this course with a deeper understanding of the intricate inter-relationship of science and the U.S. political system at the federal level.

Student Learning Objectives

At the end of this course, students will be able to:

- *Apply the principles of political science, economics and public policy to policy issues with a scientific expertise element*
- *Understand how science & U.S. government have interacted historically*
- *Show how modern science issues fit into the pattern of U.S. Public Policy*
- *Be able to distinguish between "policy for science" and "science for policy" issues*
- *Discuss the value of additional information in policy debates*

Assignments and Due Dates

%	***Assignment***	***Due***	***Details***
15%	Class Participation	ongoing	p. 3
10%	Leading Discussion on a Science & Public Policy News Article	As Assigned	p. 4
25%	Presentation on Book-length Reading	June 14	p. 5
40%	Presentation on a Science & Public Policy Issue	June 21 or 23	p. 6
10%	Final Short Paper on Science & Public Policy	June 23	p. 7
There will be no final exam – the Final Paper is the end of grading			

Course Schedule

Class #	Date	Topic
1	5/17/21	Class Introduction; Pettis Opening Lecture
2	5/19/21	Article Reviews (1); Science & Values
3	5/24/21	Article Reviews (2); Is Science Special?
4	5/26/21	Article Reviews (3); Science &Public Policy Theory
	5/31/21	Memorial Day Holiday (No Class)
5	6/2/21	Article Reviews (4); Science Advice to Policymakers
6	6/7/21	Guest Lecture: Providing Science Advice to Congress
7	6/9/21	Article Reviews (5); Policy for Science
8	6/14/21	Student Presentations on Book-Length Readings
9	6/16/21	Article Reviews (6); The Role of Citizens
10	6/21/21	Your Science & Public Policy Presentations
11	6/23/21	Your Science & Public Policy Presentations; Short Paper Due

Credit Hours

This is a 3-credit hour course. Over 10 weeks, students will spend 1 hour and 50 minutes (110 minutes) per week in class. They will also have to read material – including one book-length assignment -- watch a few videos, develop presentations and write a short paper. Over the course of the semester, students will spend about 26 hours in instructional time and 100 hours preparing for class, for a total of 126 hours

Assignment Descriptions

Class Participation (15%)

15% of your grade is based on class participation. This is a seminar, not a lecture; the class will be effective based on your participation.

Please attend all classes, or let me know in advance that you will miss a class. Please read the assigned readings before the class. Make comments in class on what you found useful, confusing, or wrong in the readings.

Your 15% grade for class participation will be determined by evidence you are engaging with the material and sharing that engagement with the other students. You'll get the full 15% if you make a few thoughtful comments during each class. While that means you have to actually make some comments, you will not be graded on the volume of your comments.

Science-related news article review (10%)

Each student will present informally on a newspaper article or magazine article (Washington Post and Wall St Journal, both available electronically for free through the Gelman Library; the journal *Science* is a great resource) pertinent to science and Public Policy and related to the readings for that class session.

Dates for your presentation will be assigned in the first class.

Presentations should take five minutes and explicitly, but concisely, address most of the following:

- A brief summary of the article, including why it is related to science and Public Policy. For some articles, the latter may be quite evident. For others, more explanation will be needed. Students are encouraged to think broadly about how "science" is represented in the article; actual scientific findings, a discussion of a political issue involving science, regulatory changes that are based on science, technology or social changes related to science, science and education, etc.
    - An example would be an article on government updates to nutrition guidelines based on newly reviewed science. Or new regulations on a form of energy production even if the science is not settled on that topic.
- An overview of how the article pertains to either a specific reading for that class session or to the overall theme for that class.
    - The link can be specific – "Course Article X talked about how people conceive of long-term risk, and my selected newspaper story discussed risk and fossil fuel exploration." Or the link can highlight something missing – "My newspaper article discussed the role of lobbying organizations in passing regulation Y, but the class readings for this week seem to suggest something else might have led to the regulation."
- The student's thoughts on the future of the issue/topic described in the article in the context of today's political climate. This includes an argument for what student believes the future state of the situation should be.
    - Many people have strong views on political issues. Students should not use this as an opportunity to belittle opposing points-of-view but instead should address this from an analytical take on the current political climate.
- An explanation of the values, constraints, and issues that make the topic controversial.
    - In particular, I expect you to seek explanations for controversy that include at least some reasons other than ignorance ("if they understood the science better there would be no controversy") and venality ("they are only ignoring the science because they have money at stake").
- A brief self-critique of the student's own position. Why might other people feel differently about the topic than does the student? What elements from one or more readings for the week can be used to inform that position?

- For example, if the newspaper article is about stem cell research and the student feels that this is a question of health research, then he or she would counter his or her own argument by describing how some see stem cells as a moral issue.

Students should not prepare any formal presentation material such as a PowerPoint or Prezi. The goal of this assignment is two-fold. First is to highlight just how often issues related to science and Public Policy are present in the news. Second is to allow students to think deeply about the different drivers for how people think about these issues, and how those varying inputs might lead to varying decisions on best political courses of actions. In other words, putting yourself in the shoes of those who may think differently. This is also good practice for your presentation at the end of the class.

Presentation on Book-Length Reading (25%)

About halfway through the class, I'm asking you to summarize for the other students one of the book-length major works about Science & Policy. Your presentation should address the main points of each work sufficiently for your fellow students to know when they might want to turn to these books for relevant examples, data, or arguments. You may pick from the following works:

- Benedick, R. E. (1998). *Ozone Diplomacy: New Directions in Safeguarding the Planet* (Enlarged Edition ed.). Cambridge, Massachusetts: Harvard University Press.
- Bimber, Bruce, *The Politics of Expertise in Congress: The Rise and Fall of the Office of Technology Assessment*, State University of New York Press, Albany NY, 1996
- Boston Review & Verso Books, *Thinking in a Pandemic,* ed. Matt Lord, 2020
- Bush, Vannevar, *Science,The Endless Frontier: A Report to the President on A Program for Postwar Scientific Research*
- Foster & Huber, *Judging Science Scientific Knowledge and the Federal Courts,* MIT Press, 1997
- Gilpin, Robert and Christopher Wright, eds. *Scientists and National Policymaking*, Columbia University Press, New York NY, 1964
- Herken, Gregg, *Cardinal Choices: Presidential Science Advising from the Atomic Bomb to SDI (Revised and Expanded Edition)*, Stanford University Press, Stanford CA, 2000
- Hewlett & Anderson, *The New World 1939/1946. Volume 1 of a History of the United States Atomic Energy Commission*, Pennsylvania University Press, 1962
- Jasanoff, Shelia, *The Fifth Branch: Science Advisers as Policymakers*, Harvard University Press, Cambridge MA, 1990
- Kleinman, Daniel, *Science, Technology, and Democracy,* State University of New York Press, 2000
- Majone, Giandomenico, *Evidence, Argument, and Persuasion in the Policy Process,* Yale University Press, 1989
- Mooney, Chris, *The Republican War on Science*, Basic Books, New York NY, 2005

- National Research Council, *The Pervasive Role of Science, Technology & Health in Foreign Policy: Imperatives for the Department of State*, The National Academies Press, 1999
- Neustadt, R. E., & Fineberg, H. V. (1979). *The Swine Flu Affair: Decision-Making on a Slippery Disease*: Government Printing Office.
- Okasha, Samir, Philosophy of Science: A Very Short Introduction, Oxford Univeristy Press, 2002
- Pigliucci, Massimo, *Nonsense on Stilts: How to Tell Science From Bunk,* 2018
- Smith, B. L. R. (1992). *The Advisors: Scientists in the Policy Process*. Washington DC: The Brookings Institution.
- Snow, C.P., *Science and Government*, Harvard University Press, Cambridge MA, 1961
- Stone, Deborah, *Policy Paradox: The Art of Political Decision Making*, W.W. Norton & Company, 2001
- Surowiecki, James, *The Wisdom of Crowds,* Anchor Books, 2005

While these may feel a little like making a book report to the class, the purpose of these presentations is to provide the other students with the essence of the work so that they can use the work as part of their presentation either as a framework for their position in the Science & Public Policy Presentation and/or as a source of data and analogy for the issue they address.

As such, I expect you to (1) explain the purpose of the work when it was written, (2) explain the structure of the book, (3) explain how the book is relevant to our topics in this class, and to what part of the class(4) summarize the main theme and conclusions of the work, (5) indicate why one might want to cite the work as a framework or example, (6) describe the major strengths and weaknesses of the text, and (7) tell us one thing you learned in the book that you think will influence how you think of science and public policy. I expect you to do those 7 things in 5 minutes.

Science & Public Policy Presentations (40%)

The last two days of the semester will be devoted to student presentations on a science and Public Policy topic of your choice. The presentations will address a topic, selected with approval of the professor, at the intersection of science and Public Policy. This is not an advocacy presentation, but rather an analysis of the issue in the way the readings have informed our thinking during the class.

Presentations will address the following: the history of how the topic came to be at the intersection of science and Public Policy; major stakeholders engaged in debate/policy formation regarding the topic; why specific stakeholders are engaged in the topic; pertinent existing or pending state or federal legislation associated with the topic; and projected outcome of whether and how the policy debate will be settled, if it isn't already.

More information on the presentation content will be discussed in class during class 4, after a few basics are under our belt, but it doesn't hurt to start thinking about a topic at the start of class. You are asked to propose a topic by class #5, for concurrence and discussion with the professor.

Presentations will be 15 minutes, with 5 minutes of question and answer.

In this presentation, again, I expect you to seek explanations for a policy or political controversy that include at least some reasons other than ignorance ("if they understood the science better there would be no controversy") and venality ("they are only ignoring the science because they have money at stake"). If you believe that ignorance and venality are the fundamental reasons for the controversy, you should defend that by discussing what else (values arguments, bureaucratic inertia, etc.) might be driving the argument and demonstrate why those are not sufficient to explain the current state of the issue.

Another part of the deliverable, in addition to the oral presentation, will be a bibliography of all sources used, and material quoted from other sources must be designated as a quotation and appropriately referenced. All work must be your own work and conform to GW's Code of Academic Integrity.

Final Short Paper on Science & Public Policy (10%)

On the last day of the class, you are expected to submit a short essay (no more than 4 pages) providing your perspective, after the readings and discussions in the class on the answer to two questions:

1. Is there a need to improve the relationship between science and U.S. policy-making?
2. (a) If so, what is the single most practical step that could be made towards such improvement or
   (b) If not, why is the current relationship okay?

It would be best to wait until the end of July to start working on this essay.

I expect the short essay to explicitly call out at least one thing you feel you have learned in the class that affects your answer.

This essay should be a place to marshal your thoughts, and make an argument, more than an exercise in literature research. This is a classic advocacy essay.

It should go without saying, but this should be your own work, not a summary of other literature. I am not asking for explicit sourcing of your thoughts – and you can feel free to call out course readings by reference without having to make a footnote or endnote citation -- you should reference any quotes that you use as quotes from others work. Plagiarism will not be tolerated.

Readings

There are no readings for the first class

Required readings for each subsequent class will be put on Blackboard at least 48 hours before the class (in most cases, much earlier than that)

There are no required texts.

Relevant Trachtenberg School Policies

1. Incompletes: A student must consult with the instructor to obtain a grade of "I" (incomplete) no later than the last day of classes in a semester. At that time, the student and instructor will both sign the CCAS contract for incompletes and submit a copy to the School Director. Please consult the TSPPPA Student Handbook or visit the website for the complete CCAS policy on incompletes.

2. Submission of Written Work Products Outside of the Classroom:
It is the responsibility of the student to ensure that an instructor receives each written assignment. Students can submit written work electronically only with the express permission of the instructor.

3. Submission of Written Work Products after Due Date: Policy on Late Work**:** All work must be turned in by the assigned due date in order to receive full credit for that assignment, unless an exception is expressly made by the instructor.

4. Academic Honesty: Please consult the "policies" section of the GW student handbook for the university code of academic integrity. Note especially the definition of plagiarism: "intentionally representing the words, ideas, or sequence of ideas of another as one's own in any academic exercise; failure to attribute any of the following: quotations, paraphrases, or borrowed information." All examinations, papers, and other graded work products and assignments are to be completed in conformance with the George Washington University Code of Academic Integrity.

5. Changing Grades after Completion of the Course: No changes can be made in grades after the conclusion of the semester, other than in cases of clerical error.

6. The Syllabus: This syllabus is a guide to the course for students. Sound educational practice requires flexibility and the instructor may therefore, at her/his discretion, change content and requirements during the semester.

7. Accommodation for Students with Disabilities**:** In order to receive accommodations on the basis of disability, a student must give notice and provide proper documentation from the Office of Disability Support Services, Marvin Center 436 (202-994-8250). Accommodations will be made based upon the recommendations of the DSS Office.

University policies

Use of Electronic Course Materials and Class Recordings

Students are encouraged to use electronic course materials, including recorded class sessions, for private personal use in connection with their academic program of study. Electronic course materials and recorded class sessions should not be shared or used for non-course related purposes unless express permission has been granted by the instructor. Students who impermissibly share any electronic course materials are subject to discipline under the Student Code of Conduct. Please contact the instructor if you have questions regarding what constitutes permissible or impermissible use of electronic course materials and/or recorded class sessions. Please contact Disability Support Services at disabilitysupport.gwu.edu if you have questions or need assistance in accessing electronic course materials.

University policy on observance of religious holidays

Students must notify faculty during the first week of the semester in which they are enrolled in the course, or as early as possible, but no later than three weeks prior to the absence, of their intention to be absent from class on their day(s) of religious observance. If the holiday falls within the first three weeks of class, the student must inform faculty in the first week of the semester. For details and policy, see "Religious Holidays" at provost.gwu.edu/policies-procedures-and-guidelines.

Academic Integrity Code

Academic Integrity is an integral part of the educational process, and GW takes these matters very seriously. Violations of academic integrity occur when students fail to cite research sources properly, engage in unauthorized collaboration, falsify data, and in other ways outlined in the Code of Academic Integrity. Students accused of academic integrity violations should contact the Office of Academic Integrity to learn more about their rights and options in the process. Outcomes can range from failure of assignment to expulsion from the University, including a transcript notation. The Office of Academic Integrity maintains a permanent record of the violation.

More information is available from the Office of Academic Integrity at studentconduct.gwu.edu/academic-integrity. The University's "Guide of Academic Integrity in Online Learning Environments" is available at studentconduct.gwu.edu/guide-academic-integrity-online-learning-environments. Contact information: rights@gwu.edu or 202-994-6757.

Academic support

Writing Center

GW's Writing Center cultivates confident writers in the University community by facilitating collaborative, critical, and inclusive conversations at all stages of the writing process. Working alongside peer mentors, writers develop strategies to write independently in academic and public settings. Appointments can be booked online at gwu.mywconline.

Academic Commons

Academic Commons provides tutoring and other academic support resources to students in many courses. Students can schedule virtual one-on-one appointments or attend virtual drop-in sessions. Students may

schedule an appointment, review the tutoring schedule, access other academic support resources, or obtain assistance at academiccommons.gwu.edu.

Support for students outside the classroom

Disability Support Services (DSS) 202-994-8250

Any student who may need an accommodation based on the potential impact of a disability should contact Disability Support Services at disabilitysupport.gwu.edu to establish eligibility and to coordinate reasonable accommodations..

Counseling and Psychological Services 202-994-5300

GW's Colonial Health Center offers counseling and psychological services, supporting mental health and personal development by collaborating directly with students to overcome challenges and difficulties that may interfere with academic, emotional, and personal success. healthcenter.gwu.edu/counseling-and-psychological-services.

Safety and Security

- In an emergency: call GWPD 202-994-6111 or 911
- For situation-specific actions: review the Emergency Response Handbook at: safety.gwu.edu/emergency-response-handbook
- In an active violence situation: Get Out, Hide Out, or Take Out. See go.gwu.edu/shooterpret
- Stay informed: safety.gwu.edu/stay-informed