POLS 4499: SCIENCE & TECHNOLOGY POLICY

Spring 2019

Department of Political Science
Idaho State University

Class Time: M 7:00-9:50 Class Room: Library 3A & CHE 303

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Course Description and Course Objectives:

Is scientific and technological advancement beyond the capabilities of humans to successfully control? Can human-made institutions effectively govern advancements that are far too complex and rapidly advancing for non-experts to sufficiently understand? Is the solution to government inaction on important, complex issues more scientific research? Is scientific research socially benign, and who decides? These are a handful of the myriad of questions that arise at the nexus of science and technology and public policy. Science and technology issues have ability to cross into virtually every issue domain – health care (e.g. stem-cell research), the environment (e.g. climate change), energy (e.g. renewable energy), economics (e.g. government support of research and design programs), crime (e.g. traffic cameras), transportation (e.g. hands-free cars), agriculture (e.g. genetically modified foods), and even social policy (e.g. the impact of assisted reproductive technologies on the abortion debate). Science and technology innovation can yield decisively positive outcomes (e.g. a cure for cancer) and unfathomable negative consequences (e.g. nuclear war). Its impact on society depends, in large part, on the decisions we make for the governance of science and technology. As science and technology continue to play a central role in modern society, it is essential to develop expertise at the interface of governance and science and technology. This course is designed for students from diverse backgrounds, such that no scientific or technical background is necessary, though a basic understanding of American government is helpful.

Upon completion of this course, students should be able to demonstrate the following competencies:

- Understanding of the science and technology policy background
- Multidisciplinary perspective to understand science and technology policy
- Multidisciplinary approaches for influencing science and technology policy
- Background on the "social science" of science and technology policy
- Expertise in conducting and presenting social science research on science and technology policy

Course Website:

We will utilize the "Moodle" course website this semester. You can access the site through the "BengalWeb" portal or at http://elearning.isu.edu/. We will frequently use the site to send messages to the class and notify you of any important class information or changes to the schedule. It is your responsibility to check this site, and you will be held responsible for all information posted. If you have difficulties accessing the site, please contact the help desk at 208-282-HELP.

Academic Misconduct:

Academic integrity is expected of all individuals at Idaho State University. As such, academic misconduct, in any form, will not be tolerated. Academic misconduct not only includes cheating and plagiarism, but also behaviors that disrupt or inhibit learning in the classroom.

Any student who chooses to cheat or plagiarize on his or her coursework will receive an F in the course and will face University disciplinary action. If you have questions regarding academic misconduct, please consult the Student Conduct System found in the Idaho State University Policies and Procedures (ISUUP) at http://www.isu.edu/policy/5000/5000-Student-Conduct-System.pdf.

Students with Disabilities:

Idaho State University is committed to providing equal opportunity in education for all students. If you have a diagnosed disability or if you believe you have a disability (physical, learning, hearing, vision, psychiatric) that might require reasonable accommodation in this course, please contact the Disability Services Center in Rendezvous Building, Room 125, via phone (282-3599), or on the web at http://www.isu.edu/ada4isu. Within the first two weeks of the semester, students should also speak with me privately to discuss your specific needs.

Expectations: Student Conduct

- Please be respectful of your fellow classmates.
- Please make every effort to be on time to class. Latecomers are a distraction to me and to your fellow classmates. Class will begin on time. At this point, students should stop conversing and put away all non-relevant materials and electronics.
- Reading newspapers, working on crossword puzzles/Sodoku, listening to music, surfing the web, texting, sleeping, or doing any outside work is not allowed in class. If I see you doing any of these things, I will ask you to leave class.
- Please feel free to use your laptop to take notes in class. However, if I see that laptops are not being utilized for class purposes, I will ban laptops for the ***entire*** class. No second chances. Don't ruin it for everyone.
- Please remember to turn off all cell phones. If you have a serious reason for why you need to keep a cell phone in class, please speak to me, and we may be able to make special arrangements.
- You are expected to have all the readings complete ***before*** you come to class. Class sessions are most valuable if students are familiar with the material. This will make class more efficient and enhance your learning experience.

Expectations: Classroom Policies

Assignments: All assignments must be **typed, printed out, and stapled**. Handwritten assignments and assignments without staples will not be accepted. Email assignments will not be accepted under any circumstance.

Late Work: Late work will not be accepted under any circumstance.

Make-Up Quizzes & Exams: Make-up quizzes and exams will only be allowed in extraordinary circumstances. Any student who does not show up for a quiz or exam must have a ***documented*** reason, which must be presented to the instructor before a make-up can be scheduled. In emergency situations, students must contact the instructor by the end of the second working day after the absence and should explain why notice could not be sent prior to class. In non-emergency situations, students must contact the professor at least ***one week BEFORE the quiz or exam*** to request a make-up exam. Requests will only be granted for extraordinary circumstances. Make-up quizzes and exams must be completed within one week of the originally scheduled exam. Please note that the makeup quiz or exam will differ from the one given in class.

Incompletes: Incompletes will only be given in extraordinary circumstances.

Syllabus: The instructor reserves the right to change the syllabus to accommodate the needs of the class.

Texts and Reading Materials:

Textbook:

There is one required text for this class.

- Grundmann, Reiner, and Nico Stehr. 2012. T*he Power of Scientific Knowledge: From Research to Public Policy*. New York: Cambridge University Press.
- Pielke, Roger A. Jr. 2007. *The Honest Broker: Making Sense of Science in Policy and Politics*. New York: Cambridge University Press.
- Sabatier, Paul A., and Christopher M. Weible (Eds.). 2014. *Theories of the Policy Process*, Third Edition. Boulder, CO: Westview Press. **(TPP)**

Other Reading Materials:

There will be other supplemental reading materials assigned throughout the semester. Please refer to the course website for this information.

Attendance Policy:

Much of your grade is based on participation, and thus your attendance is expected and mandatory. You will be allowed **1 FREE absence**. An absence is an absence. There are no excused or unexcused absences. Your free absence can be used for illness or personal reasons. Use your absence wisely, because every absence after that will result in a **3 percent deduction from your final grade**. For example, if you earn a 91 percent in the course, but you have 2 absences, you will receive an 88 percent which is a B.

Your attendance will be determined by a daily sign-in sheet. It is your responsibility to make sure you sign in at each class period. The sign-in sheet is the official and final record. Latecomers will not be allowed to sign in. Please do not sign the attendance sheet for another classmate. This is considered academic dishonesty. If you must miss class, it is your responsibility to contact a fellow classmate to find out what you missed.

- Absence 1 & 2..... FREE
- Absence 2+ .....Lose 3% from Final Overall Grade for **Each** Absence

Grading:

Final grades will be determined on the following basis:

- Participation.....10%
- Reaction Papers (6).....30%
- Research Paper.....30%
- Research Presentation.....15%
- Discussion Leader 1.....5%
- Discussion Leader 2.....10%

Grades will be determined on the following scale:

- A.....90-100%
- B.....80-89%
- C.....70-79%
- D.....60-79%
- F .....59% and Below

**** Note:** I will round up percentages that are .5 and above. For example, a student with an 89.5% will receive an A. A student with an 89.49% will receive a B.

Participation:

Participation is an important part of the learning process, and thus I expect each student to take an active role in class and engage the literature and course concepts. Asking questions and making thoughtful contributions to the class demonstrates your knowledge and preparation for the class. Remember that the ***quality*** of a contribution is more important than the ***quantity*** of contributions. Participation will account for 10 percent of your overall course grade.

Participation grades will be assigned as follows:

- 10 Points: Actively participates in all class sessions. Contributions are thoughtful and demonstrate preparation and a critical engagement of the literature.
- 8 Points: Actively participates in most class sessions. Contributions are thoughtful and demonstrate preparation and a critical engagement of the literature.
- 6 Points: Occasionally participates in class sessions. Contributions are thoughtful and demonstrate preparation and a critical engagement of the literature.
- 4 Points: Rarely participates in class sessions. Contributions are thoughtful and demonstrate preparation and a critical engagement of the literature.
- 2 Point: Rarely participates in class sessions. Contributions are shallow and demonstrate lack of preparation.
- 0 Points: Never participates in class.

**** NOTE:** It is impossible to earn a high participation grade if you are not in class.

Policy Reaction Papers:

You will be asked to complete six policy reaction papers throughout the semester, each worth 5% of your overall grade. You will need to write a policy reaction paper on the class topics for which you are the discussion leader. Beyond that, you are able to choose any class topic you want to write the remaining four policy reaction papers.

A policy reaction paper is to be single spaced with 12 point, Times New Roman font. The paper is to have 1 inch margins. Your name should be placed in the Header. Policy reaction papers are to be no longer than 3 full pages, but at least 2 full pages (basically, try to get to the third page). You will have the opportunity at some point in the semester to do an optional policy reaction paper that can be used to replace the policy reaction paper with the lowest grade.

A policy reaction paper is designed to make you think more deeply about how scientific research may make policy recommendations without understanding how the policy process works. You will need to identify the policy theory that best allows you to explain how the policy recommendation falls short and how the policy recommendation needs to be reconfigured to be consistent with what policy theories tells us. In other words, use a policy theory to outline a path that would allow the science to result in a successful policy adoption.

If the scientific research doesn't make a specific policy proposal/recommendation, take the research and discuss how the policy theories would help you to take that results of that research and design a policy.

Policy reaction papers are **not** for you to tell me what the readings said. I have read them, and do not need you to remind me what was said. They are an attempt to make you realize how you can apply what you are learning in this course to scientific issues.

Research Paper:
You are expected to write a research paper by the end of the semester that will apply one of the theories covered in class. I operate with a basic rule when it comes to research papers: If you have to write one, you might as well write one that could eventually be published. Otherwise, you will have put in an inordinate amount of time and effort for no reason, other than a grade. While a good grade is a legitimate reason to write a quality research paper, you are unlikely to still put your good grade on the refrigerator. In short, there is limited utility in simply obtaining a good grade. On the other hand, if you decide to put in the work and pursue a project to publication, you will always be able to brag that you have been published in a peer-reviewed, academic outlet. Not many people get to make that claim, and it will make it easier to find a well-paying job upon graduation.

It is in your best interest to start thinking and working on this toward the beginning of the semester. At the very least, identify an issue domain that you find interesting. If you have completed a statistical methodology course you are expected to run some sort of analysis. If you have not completed the course, I will establish some basic expectations for what you are to do for your analysis.

Research Presentation:
You are expected to present your research to the class and invited guests. Mostly, the research presentation is your opportunity to show off how awesome you are, and how great you are at conducting research. Presentations will be between 10 and 15 minutes in length, and a PowerPoint presentation is required. This will be a conference-style presentation (stylized from political science).

Discussion Leader:
You are expected to be a discussion leader for two class periods. I expect that you will be better prepared during the second class than the first, so it will be worth more. Discussion leaders are expected to read the material more carefully than you might otherwise. It is recommended that you read the material twice, and take careful notes when you are the discussion leader. Discussion leaders are not expected to lecture or simply ask a lot of questions from the rest of the class.

The discussion leader is expected to lead the class in a deeper discussion of what everyone read. If, as you read, you have a question as to why they did something a particular way, then you could ask it of the class. However, instead of simply asking, you may want to preface it with a brief explanation as to why you had concerns about that aspect of the reading. Class discussions are intended to make the class better understand theory. If something is convoluted or incredibly simplistic, it is acceptable to criticize. Do not feel that you need to filibuster for the remainder of the class. The good news is that your classmates will often take the discussion into directions you never intended. As the discussion leader, it is your job to help steer the conversation back to the bigger picture of the theory if it appears we are going too far off track (I will help if necessary). However, keep in mind that it is sometimes useful to allow the class to deviate from your plan to better allow everyone to understand because we all learn in different ways.

Extra Credit:
The only scheduled extra credit is the optional reaction paper. No additional extra credit is scheduled for this course. If additional extra credit is assigned, it will be available to every student in the course. If additional extra credit is assigned, it will be in response to a current event, where students will be

expected to apply the theory discussed in class to that situation. Do not ask for additional extra credit opportunities for the class. If additional extra credit is assigned, it will be as a reward for the students clearly demonstrating that they are prepared for class and actively participating in discussion. Extra credit is a reward, not a right. **Under no circumstance will extra credit will ever be granted to a single individual – do not ask**.

Contacting the Instructor

- Office Hours: The best way to communicate with me is during office hours. In office hours, I can provide you with the most assistance and answer specific questions. You are welcome to drop by office hours, but it is always a good idea to send me an email to let me know you are coming by. This is especially useful if you need something specific.
- Email: Email is the best method for contacting me outside of office hours. Please note that I will make every effort to respond to all emails within 24 hours during regular business hours. I cannot make the same promise over the weekend, so if you send me an email on Friday, I will likely not be able to respond to you until I return to campus on Monday morning. This means that you need to plan ahead, because I will likely not be able to respond to emergency emails the night before due dates.
- Phone: I have a phone in my office, however, this is not the best method to contact me as I am in and out of my office all day.

Email Etiquette

- When contacting **ANY** instructor (professor or GTA), you should observe the following etiquette:
- Subject Line: Your instructors teach multiple courses and receive many email messages every day. If you don't want your email to get lost, you need to provide a descriptive subject line. For this course you should use the following format.
    - Course Name/Number (Class Time): Last Name (Subject)
    - Ex.: POLS 5###: Smith (Requesting Appointment)
- Greeting: You should always use a proper, formal greeting. Be sure to use your professor's correct title.
- Email Body: Be sure to use proper grammar when writing your email. Do not use texting language. If you are addressing multiple topics, be sure to use multiple paragraphs. Make the email as easy to read as possible.
- Sign-Off: Always end your message with some form of signature (i.e. Sincerely, Best, Thank You, etc.) and your full name.
- Permanent Signature: You should consider creating a permanent signature with your name and contact information. This helps your recipient to find your contact information quickly.
- Your First Extra Credit Opportunity: This is a test to see if you have actually read the entire syllabus. If you have read this far, please send one email that is addressed to me. In your email, you should introduce yourself and tell me your favorite color. You should be sure to follow all the email guidelines outlined above. You should send your email no later than January 14th at noon. If you send your email by this deadline, you will receive 1 percentage point of extra credit added to your overall final grade.

Course Schedule, Topics, and Readings:

Week	Date	Topics & Readings
Week 1	**January 7th**	**Introduction & Overview of the Course**
		No Readings
Week 2	**January 14th**	**Policy Diffusion**
		TPP: Chapter 9
		Matisoff, Daniel C. 2008. "The Adoption of State Climate Change Policies and Renewable Portfolio Standards: Regional Diffusion or Internal Determinants?" *Review of Policy Research* 26(6): 527-546.
		Stoutenborough, James W., and Matthew Beverlin. 2008. "Encouraging Pollution-Free Energy: The Diffusion of State Net Metering Policies." *Social Science Quarterly* 89(5): 1230-1251.
		Social Construction
		TPP: Chapter 4
		Rayner, Steve. 2012. "Uncomfortable Knowledge: The Social Construction of Ignorance in Science and Environmental Policy Discourses." *Economy and Society* 41(1): 107-125.
		Ingram, Mrill, and Helen Ingram. 2006. "Creating Credible Edibles: The Organic Agriculture Movement and the Emergence of U.S. Federal Organic Standards." In David Meyer, Valerie Janness, and Helen Ingram, (Eds.), *Routing the Opposition: Social Movements, Public Policy, and Democracy*. Minneapolis: University of Minnesota Press. 121-148.
Week 3	**January 21st**	**NO CLASS: Martin Luther King Jr. Day**
Week 4	**January 28th**	**Multiple Streams**
		TPP: Chapter 2
		Avery, George. 2004. "Bioterrorism, Fear, and Public Health Reform: Matching a Policy Solution to the Wrong Window." *Public Administration Review* 64(3): 275-288.
		Brunner, Steffen. 2008. "Understanding Policy Change: Multiple Streams and Emissions Trading in Germany." *Global Environmental Change* 18(2008): 501-507.
		Punctuated Equilibrium
		TPP: Chapter 3
		Baumgartner, Frank R., and Bryan D. Jones. 1991. "Agenda Dynamics and Policy Subsystems." *Journal of Politics* 53(4): 1044-1074.
		Holt, Diane, and Ralf Barkemeyer. 2012. "Media Coverage of Sustainable Development Issues – Attention Cycles or Punctuated Equilibrium?" *Sustainable Development* 20(1): 1-17.
Week 5	**February 4th**	**Narrative Policy Framework**
	IF	TPP: Chapter 7
		Kirkpatrick, Kellee J., and James W. Stoutenborough. 2018. "Strategery, Narratives, and Reading the Public: Developing a Micro-Level Theory of Political Strategies within the Narrative Policy Framework." *Policy Studies Journal* 46(4): 949-977.
		Stoutenborough, James w., Mark K. McBeth, and Donna L. Lybecker. Under Review. "Risk and River Narratives: Incorporating Risk Perceptions into the Narrative Policy Framework."
		Institutional Rational Choice & Advocacy Coalition Framework
		TPP: Chapters 6 & 8
		Litfin, Karen T. 2000. "Advocacy Coalitions Along the Domestic-Foreign Frontier: Globalization and Canadian Climate Change Policy." *Policy Studies Journal* 28(1): 236-252
		Koontz, Tomas M. 2006. "Collaboration for Sustainability? A Framework for Analyzing Government Impacts in Collaborative-Environmental Management." *Sustainability: Science, Practice, & Policy* 2(1): 15-24.

Week 6	**February 11th**	**Shifting Science and Technology Policy to the States: Narrowing the Scope of Conflict to Avoid the National Government**
		Schattschneider, E. E. 1960. "The Contagiousness of Conflict." In: *The Semisovereign People: A Realist's View of Democracy in America*. New York: Wadsworth
		Schattschneider, E. E. 1960. "The Scope and Bias of the Pressure System." In: *The Semisovereign People: A Realist's View of Democracy in America.* New York: Wadsworth
		Rabe, Barry G. 2013. "Racing to the Top, the Bottom, or the Middle of the Pack? The Evolving State Government Role in Environmental Protection." In Norman J. Vig and Michael E. Kraft, (eds.), *Environmental Policy: New Directions for the 21st Century*, Eighth Edition. Washington, D.C.: CQ Press. Pp 30-53.
		Scientific Roadblocks: Risk, Knowledge & Science Communication
		Stoutenborough, James W., and Arnold Vedlitz. 2014. "The Effect of Perceived and Assessed Knowledge of Climate Change on Public Policy Concerns: An Empirical Comparison." *Environmental Science & Policy* 37(March): 23-33.
		Stoutenborough, James W., Arnold Vedlitz, and Xinsheng Liu. 2015. "The Influence of Specific Risk Perceptions on Public Policy Support: An Examination of Energy Policy." *The ANNALS of the American Academy of Political and Social Science* 658(1): 102-120.
		Wynne, Brian. 2006. "Public Engagement as a Means of Restoring Public Trust in Science – Hitting the Notes, but Missing the Music." *Public Health Genomics* 9(3): 211-220.
Week 7	**February 18th**	**NO CLASS: Presidents' Day**
Week 8	**February 25th**	**From Scientific Knowledge to Informed Policy**
		Grundmann, Reiner, and Nico Stehr. 2012. *The Power of Scientific Knowledge: From Research to Public Policy*. New York: Cambridge University Press. • Do not read chapter 4
		Issue Domains: The Environment
		O'Neill, Kate. 2015. "Architects, Agitators, and Entrepreneurs: International and Nongovernmental Organizations in Global Environmental Politics." In Regina S. Axelrod and Stacy D. VanDeveer (Eds.), *The Global Environment: Institutions, Law, and Policy*, Fourth Edition. Washington, D.C.: CQ Press. Pp 26-52.
		Peel, Jacqueline. 2015. "International Law and the Protection of the Global Environment." In Regina S. Axelrod and Stacy D. VanDeveer (Eds.), *The Global Environment: Institutions, Law, and Policy*, Fourth Edition. Washington, D.C.: CQ Press. Pp 53-82.
		Howarth, Candice, and Irene Monasterolo. 2016. "Understanding Barriers to Decision Making in the UK Energy-Food-Water Nexus: The Added Value of Interdisciplinary Approaches." *Environmental Science & Policy* 61(July): 53-60.
Week 9	**March 4th**	**The Role of Science in Politics**
	IF	Pielke, Roger A. Jr. 2007. *The Honest Broker: Making Sense of Science in Policy and Politics*. New York: Cambridge University Press.
		Issue Domains: Water
		Turton, Anthony. 2016. "South Africa and the Drought that Exposed a Young Democracy." *Water Policy* 18(2016): 210-227.
		Tetreault, Gerald R., Charles J. Bennett, K. Shires, B. Knight, Mark R. Servos, and Mark E. McMaster. 2011. "Intersex and Reproductive Impairment of Wild Fish Exposed to Multiple Municipal Wastewater Discharges." *Aquatic Toxicology* 104(3-4): 278-290.
		Petheram, C., J. Hughes, L. McKellar, S. Kim, L. Holz, P. Poulton, M. Kehoe, S. Podger, G. Pdger, D. McJannet, and J. Hornbuckle. 2016. "A Method for Comprehensively Assessing Economic Trade-Offs of New Irrigation Developments." *Water Resources Management* 30(13): 4617-4634.

Week 10	**March 11th**	**Issue Domains: Health**
		Vogel, David. 2012. "Chemicals and Hazardous Substances." In: *The Politics of Precaution: Regulating Health, Safety, and Environmental Risks in Europe and the United States*. Princeton, NJ: Princeton University Press. Pp 153-188.
		Vogel, David. 2012. "Consumer Safety." In: *The Politics of Precaution: Regulating Health, Safety, and Environmental Risks in Europe and the United States*. Princeton, NJ: Princeton University Press. Pp 189-218.
		Moy, Beverly, Blasé N. Polite, Michael T. Halpern, Steven K. Stranne, Eric P. Winer, Dana S. Wollins, and Lisa A. Newman. 2011. "American Society of Clinical Oncology Policy Statement: Opportunities in the Patient Protection and Affordable Care Act to Reduce Cancer Care Disparities." *Journal of Clinical Oncology* 29(28): 3816-3824.
		Issue Domains: Health 2
		Robertson, John A. 1999. "Ethics and Policy in Embryonic Stem Cell Research." *Kennedy Institute of Ethics Journal* 9(2): 109-136.
		Ahuja, Kamal K. 2012. "China's Model of Egg Donation is a Policy Lesson for Britain." *Reproductive BioMedicine Online* 24(3): 257-260.
		Kalfoglou, A. L., M. Kammersell, S. Philpott, and E. Dahl. 2013. "Ethical Arguments For and Against Sperm Sorting for Non-Medical Sex Selection: A Review." *Reproductive BioMedicine Online* 26(3): 231-239.
Week 11	**March 18th**	**NO CLASS: Spring Break**
Week 12	**March 25th**	**Issue Domains: Climate Change**
		Guber, Deborah Lynn, and Christopher J. Bosso. 2013. "'High Hopes and Bitter Disappointment': Public Discourse and the Limits of the Environmental Movement in Climate Change Politics." In Norman J. Vig and Michael E. Kraft, (eds.), *Environmental Policy: New Directions for the 21st Century*, Eighth Edition. Washington, D.C.: CQ Press. Pp 54-82.
		Carr, Wylie, Laurie Yung, and Christopher Preston. 2014. "Swimming Upstream: Engaging the American Public Early on Climate Engineering." *Bulletin of the Atomic Scientists* 70(3): 38-48.
		Grundmann, Reiner, and Nico Stehr. 2012. T*he Power of Scientific Knowledge: From Research to Public Policy*. Chapter 4
		Issue Domains: Climate Change 2
		Fletcher, Robert. 2011. "When Environmental Issues Collide: Climate Change and the Shifting Political Ecology of Hydroelectric Power." *Peace & Conflict Review* 5(1): 1-15.
		Ricci, P., C. Umstätter, J. P. Holland, and A. Waterhouse. 2014. "Does Diverse Grazing Behavior of Suckler Cows have an Impact on Predicted Methane Emissions?" *Journal of Animal Science* 92(3): 1239-1249.
		Betsill, Michele, and Matthew J. Hoffmann. 2011. "The Contours of 'Cap and Trade': The Evolution of Emissions Trading Systems for Greenhouse Gases." *Review of Policy Research* 28(1): 83-106.
Week 13	**April 1st**	**Issue Domains: Energy**
	IF	Pearce-Higgins, James W. Leigh Stephen, Andy Douse, and Rowena H. W. Langston. 2012. "Greater Impacts of Wind Farms on Bird Populations During Construction than Subsequent Operation: Results of a Multi-Site and Multi-Species Analysis." *Journal of Applied Ecology* 49(2): 386-394.
		Ellsworth, William L. 2013. "Injection-Induced Earthquakes." *Science* 341(6142): 1225942-1 – 1225942-7.
		Hill, Jason, Liaila Tajibaeva, and Stephen Polasky. 2016 "Climate Consequences of Low-Carbon Fuels: The United States Renewable Fuel Standard." *Energy Policy* 97(October): 351-353.
		Thomson, R. Camilla, Gareth P. Harrison, and John P. Chick. 2017. "Marginal Greenhouse Gas Emissions Displacedment of Wind Power in Great Britain." *Energy Policy* 101(February): 201-210.

		Issue Domains: Energy 2
		Curran, Scott J., Robert M. Wagner, Ronald L. Graves, Martin Keller, and Johney B. Green Jr. 2014. "Well-to-Wheel Analysis of Direct and Indirect Use of Natural Gas in Passenger Vehicles." *Energy* 75(September): 194-203.
		Neill, Simon P., M. Reza Hashemi, and Matt J. Lewis. 2014. "Optimal Phasing of the European Tidal Stream Resources Using the Greedy Algorithm with Penalty Function." Energy 73(July): 997-1006.
		Wiser, Ryan, Trieu Mai, Dev Millstein, Jordan Macknick, Alberta Carpenter, Stuart Cohen, Wesley Cole, Bethany Frew, and Garvin Heath. 2016. *On the Path to Sunshot: The Environmental and Public Health Benefits of Achieving High Penetrations of Solar Energy in the United States*. Golden, CO: National Renewable Energy Laboratory. NREL/TP-6A20-65628
Week 14	**April 8th**	**Issue Domains: Agriculture and Food Safety**
		DeLonge, Marcia S., Albie Miles, and Liz Carlisle. 2016. "Investing in the Transition to Sustainable Agriculture." *Environmental Science & Policy* 55(1): 266-273.
		Wilson, P., N.J. Glithero, and S.J. Ramsden. 2014. "Prospects for Dedicated Energy Crop Production and Attitudes towards Agricultural Straw Use: The Case of Livestock Farmers." *Energy Policy* 74(November): 101-110.
		Schiffino, Nathalie, and Seve Jacob. 2011. "Risk, Democracy and Schizophrenia: The Changing Roles of Citizens in Risk Policy-Making Putting GMO Policy to the Test." *Journal of Risk Research* 14(8): 983-993.
		Issue Domains: Agriculture and Food Safety 2
		Ashworth, Amanda J., Fred L. Allen, Jason P. Wight, Arnold M. Saxton, Don D. Tyler. 2014. "Long-Term Soil Organic Carbon Changes as Affected by Crop Rotation and Bio-Covers in No-Till Crop Systems." In Alfred E. Hartemink and Kevin McSweeney (Eds.), *Soil Carbon*. :Springer. Pp. 271-279.
		Briske, D. D., Nathan F. Sayre, L. Huntsinger, M. Fernandez-Gimenez, B. Budd, and J. D. Derner. 2011. "Origin, Persistence and Resolution of the Rotational Grazing Debate: Integrating Human Dimensions into Rangeland Research." *Rangeland Ecology & Management* 64(4): 325-334.
		Hoffman, Sandra. 2011. "U.S. Food Safety Policy Enters a New Era." *Amber Waves* 9(4): 24-29.
Week 15	**April 15th**	**Issue Domain: Space Policy**
	IF	Hilborne, Mark. 2013. "China's Rise in Space and US Policy Responses: A Collision Course?" *Space Policy* 29(2): 121-127.
		Cokley, J., W. Rankin, P. Heinrich, and Marisha B. McAuliffe. 2013. "Comparison of Historic Exploration with Contemporary Space Policy Suggests a Retheorisation of Settings." *British Interplanetary Society Journal* 66(7-8): 233-241.
		Chapman, Bert. 2015. "Waste and Duplication in NASA Programs: The Need to Enhance U.S. Space Program Efficiency." *Space Policy* 31(February): 13-20.
		Issue Domain: Internet and Computers
		Thierer, Adam. 2006. "Are 'Dumb Pipe' Mandates Smart Public Policy? Vertical Integration, Net Neutrality, and the Network Layers Model." In Thomas M. Lenard and Randolph J. May (Eds.), *Net Neutrality or Net Neutering: Should Broadband Internet Services Be Regulated?* New York: Springer. Pp 73-108.
		Boyd, Danah, and Kate Crawford. 2012. "Critical Questions for Big Data: Provocations for a Cultural, Technological, and Scholarly Phenomenon." *Information, Communication & Society* 15(5): 662-679.
		McMullan, John, and David Perrier. 2007. "The Security of Gambling and Gambling with Security: Hacking, Law Enforcement and Public Policy." *International Gambling Stu*dies 7(1): 43-58.

Week 16	**April 22nd**	**Issue Domain: Surveillance and Privacy**
		Young, Alyson Leigh, and Anabel Quan-Haase. 2013. "Privacy Protection Strategies on Facebook: The Internet Privacy Paradox Revisited." *Information, Communication & Society* 16(4): 479-500.
		West, Jonathan P., and James S. Bowman. 2016. "The Domestic Use of Drones: An Ethical Analysis of Surveillance Issues." *Public Administration Review* 76(4): 649-659.
		Trottier, Daniel. 2014. "Crowdsourcing CCTV Surveillance on the Internet." *Information, Communication & Society* 17(5): 609-626.
		Policy Debate: Conflicting Science and the Pros and Cons of Plug-In Hybrid Electric Vehicles *(Read in this Order)*
		Stephan, Craig H., and John Sullivan. 2008. "Environmental and Energy Implications of Plug-In Hybrid-Electric Vehicles." *Environmental Science & Technology* 42(4): 1185-1190.
		Sovacool, Benjamin K., and Richard F. Hirsh. 2009. "Beyond Batteries: An Examination of the Benefits and Barriers to Plug-in Hybrid Electric Vehicles (PHEVs) and a Vehicle-to-Grid (V2G) Transition." *Energy Policy* 37(3): 1095-1103.
		Mudd, Gavin M. 2010. "Global Trends and Environmental Issues in Nickel Mining: Sulfides versus Laterites." *Ore Geology Reviews* 38(1-2): 9-26.
		Adams, Scott V., Michael N. Passarelli, and Polly A. Newcomb. 2012. "Cadmium Exposure and Cancer Mortality in the Third National Health and Nutrition Examination Survey Cohort." *Occupational & Environmental Medicine* 69(2): 153-156.
		Huang, Shisheng, Bri-Mathias S. Hodge, Farzad Taheripour, Joseph F. Pekny, Gintaras V. Reklaitis, and Wallace E. Tyner. 2011. "The Effects of Electricity Pricing on PHEV Competitiveness." *Energy Policy* 39(3): 1552-1561.
FINALS WEEK	**April 29th 8:00-10:00pm**	**Presentations**
	May 1st	*****Research Paper Due (by 5pm in Political Science Office)**

****NOTE: The instructor reserves the right to make changes to the schedule to accommodate the needs of the class. If necessary, an updated schedule will be posted on Moodle.**