Course Change Request

New Course Proposal

Date Submitted: 09/17/21 10:03 am

Viewing: EVPP 530 : Evidence-Based Environmental Policymaking

Last edit: 09/17/21 10:03 am

Changes proposed by: jbazaz

In Workflow

1. **ESP Chair**
2. **SC Curriculum Committee**
3. SC Associate Dean
4. Assoc Provost-Graduate
5. Registrar-Courses
6. Banner

Approval Path

1. 08/04/21 12:31 pm A. Alonso Aguirre (aaguirr3): Approved for ESP Chair
2. 08/10/21 3:41 pm Jennifer Bazaz Gettys (jbazaz): Rollback to Initiator
3. 09/17/21 10:07 am A. Alonso Aguirre (aaguirr3): Approved for ESP Chair

Are you completing this form on someone else's behalf?

Yes

Requestor:

Name	Extension	Email
Dr. Karen Akerlof	3-7069	kakerlof@gmu.edu

Effective Term: Fall 2021

Subject Code: EVPP - Environmental Science & Policy **Course Number:** 530

Bundled Courses:

Is this course replacing another course? No

Equivalent Courses:

Catalog Title: Evidence-Based Environmental Policymaking

Banner Title: Evd-Based Envrnmntl Plcymkng

Will section titles vary by semester? No

Credits: 3

Schedule Type: Lecture

Hours of Lecture or Seminar per week: 3

Repeatable: May only be taken once for credit (NR)
GRADUATE ONLY

Default Grade Mode: Graduate Regular

Recommended Prerequisite(s):

Recommended Corequisite(s):

Required Prerequisite(s) / Corequisite(s) (Updates only):

Registrar's Office Use Only - Required Prerequisite(s)/Corequisite(s):

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?

Registration Restrictions (Updates only):

Registrar's Office Use Only - Registration Restrictions:

Field(s) of Study:

Class(es):

Level(s):

Degree(s):

School(s):

Catalog Description:

Longstanding calls for a "new social contract for science" demand that environmental scientists help meet societal needs by providing information to address global problems such as biodiversity conservation and climate change. But scientists' generation of what they perceive to be useful research doesn't necessarily equate to its usability in policy decisions. Through readings, guest lectures, and a variety of hands-on assignments, this course will explore the meaning of "evidence-based policymaking," the benefits—and limitations—of using science in decision-making, and ways that individuals and organizations can build capacity, whether within research or policymaking institutions.

Justification:

The proposed course addresses a current gap in the department's graduate curricula. The core assumption of "environmental science and policy" is that science can effectively inform policy processes. However, this is often not the case. The movement for evidence-based policy has promoted the emergence of renewed interest in the conditions under which scientific information is most likely to be used to inform government policies and programs: information design and accessibility, the nature of producer and user communication, and information delivery that fits decision-making routines. The academic study of evidence-based policy parallels, and feeds into, current government and non-profit discussions and implementation of new approaches in the U.S. and abroad. Therefore, it is vital for an understanding of current environmental policy practice. A diverse array of implementation mechanisms exists, from formal mechanisms for the communication of governmental science advice (assessments, boundary organizations, advisory bodies) to informal relationships, such as between individual scientists and policymakers.

Does this course cover material which crosses into another department? No

Learning Outcomes:

- Students will have a greater appreciation and understanding of the ways in which scientific information is used for policy decisions.
- Students will be able to describe what "evidence-based policymaking" means to different audiences and provide examples of the ways in which evidence-based policymaking presents across different issue domains and institutional contexts.
- Students will take a systems approach in analyzing the challenges of creating usable research knowledge and making recommendations to bolster decision-making capacity.
- Students will be able to communicate their knowledge about this subject orally and in writing, to a variety of audiences.
- Students will be able to apply the course information and skills to real world situations.

Attach Syllabus

EVPP 530 EBPM FALL 2021 091721.pdf

Additional Attachments

Staffing:
Dr. Karen Akerlof

Relationship to Existing Programs:
The course will connect the practices of science and policymaking in order to promote student understanding of the contexts in which science effectively addresses the decision-making needs of policymakers. To the knowledge of the instructor (K. Akerlof), no such course currently exists within the university.

Relationship to Existing Courses:
Not Applicable

Additional Comments:
Offered Fall 2020 under EVPP 505 (Special Topics Course Number)

Reviewer Comments
Jennifer Bazaz Gettys (jbazaz) (08/10/21 3:41 pm): Rollback: Please revise the Learning Outcome section, I think the text was misplaced in that box. Thanks!

Key: 17285

Evidence-based Policymaking | EVPP 530

Instructor: Asst. Prof. Karen Akerlof
Email: kakerlof@gmu.edu

Class Schedule: Mondays, 4:30 - 7:10 pm
Location: Zoom (see below)
Office Hours: Fridays, 10 am-noon, or by appointment (phone, Skype, or Zoom)

COURSE ADJUSTMENTS DUE TO COVID-19

1) The course will be delivered in an online lecture and discussion format using Zoom. If you have any problems using Zoom, please let me know.

   Join Zoom Meeting
   https://gmu.zoom.us/j/94427701218?pwd=eHJmckhKZUE1UVU5aFlkTVB2a2pvQT09
   Meeting ID: 944 2770 1218
   Passcode: EVPP505

2) Optimally, we will all learn from each other in this course. In order for that to occur, we need to be able to see and hear from everyone. Please plan on using your web camera and speaking during the class sessions. Activities and assignments in this course will regularly use web-conferencing software (Zoom). Students are required to have a device with a functional camera and microphone. In an emergency, students can connect through a telephone call, but video connection is the expected norm.

3) Activities and assignments in this course will regularly use the Blackboard learning system, available at https://mymason.gmu.edu. Students are required to have regular, reliable access to a computer with an updated operating system (recommended: Windows 10 or Mac OSX 10.13 or higher) and a stable broadband Internet connection (cable modem, DSL, satellite broadband, etc., with a consistent 1.5 Mbps [megabits per second] download speed or higher. You can check your speed settings using the speed test on this website.)

4) Mason's site on COVID-19 is located here: https://www2.gmu.edu/coronavirus. If you experience difficulties during the term, please let me know. I recognize that the fall term may be challenging in myriad ways that are difficult to predict. Your health and wellbeing—and that of your family—take priority.

Course description and rationale

During the last decade, enthusiasm for evidence-based policy has grown in the United States across numerous domains, from health and education to the environment. Calls for a "new social contract for science" demand that environmental scientists help meet societal needs to address wicked global problems such as biodiversity conservation and climate change. This contract necessitates superseding disciplinary boundaries to advance knowledge, attending to problems of societal importance, and bridging across academia, government, the private sector, civil society, and the public to integrate insights. Calls for evidence-based policymaking have been even more visible on the other side of the Atlantic, where the United Kingdom has led a series of initiatives, starting in 2010, to figure out "what works." But this enthusiasm belies challenges not only in using science for policy but even in defining the meaning of "evidence," "policy," and "use."

Since World War II, the social contract between the federal government and universities has supported an independent scientific and technological research enterprise in exchange for knowledge and workforce education. Much of the focus on science policy after the war was on the physical and biological sciences; indeed, the use of the phrase "science-based policy" often refers to these disciplines. However, the emphasis of "evidence-based policy" in recent decades has been on the use of social science for improving policy decisions in areas such as health, education, criminal justice, and welfare. Whereas in 1945 Vannevar Bush's *Science, the Endless Frontier* spoke to the use of science to help government fight disease, protect our national security, and create jobs, evidence-based policy speaks to making data-based decisions that bring higher returns to investments in government programs, better alignment between program outcomes and policy goals, and transparency in decision-making. In this course we will address evidence-based policymaking from both of these perspectives: the use of the social *and* natural sciences in environmental governance.

Evidence-based policymaking is not without its critics, however, some of whom point instead to the need for "evidence-*informed*" policymaking in recognition that the potential quantity and range of evidence for any decision might be quite large, and that other factors—such as politics and stakeholder interests—also play a legitimate role. This course explores the meaning of "evidence-based policymaking," the value of science in decision-making and its limitations, and ways that individuals and organizations can build capacity in creating usable science and using science in policy.

Learning objectives

- Students will have a greater appreciation and understanding of the ways in which scientific information is used for policy decisions.
- Students will be able to describe what "evidence-based policymaking" means to different audiences and provide examples of the ways in which evidence-based policymaking presents across different issue domains and institutional contexts.

- Students will take a systems approach in analyzing the challenges of creating usable research knowledge and making recommendations to bolster decision-making capacity.
- Students will be able to communicate their knowledge about this subject orally and in writing, to a variety of audiences.
- Students will be able to apply the course information and skills to real world situations.

Assignments and grading

You will have five types of assignments: 1) participation in Blackboard course discussions about the week's reading; 2) a short essay on your reactions to watching a congressional hearing on a science-related issue; 3) a short opinion article to a journal within your discipline on how its scientists can improve the societal relevance and accessibility of their work; 4) a policy memo for a congressional office on the policy implications of an area of science in which you are interested and have expertise**;** and 5) a final paper describing a case study of how science was—or was not—used by decision-makers and diagnosing the reasons for these failures and successes with recommendations for future improvements. These assignments will constitute your grade for the term. You will be given a rubric prior to each assignment that details all required components and their associated point value; due dates will be provided along with the rubrics. All students will also be expected to complete a certificate on plagiarism.

Participation in course discussions

Each week you will be expected to contribute to a discussion of the week's readings on Blackboard by submitting a comment of 1-2 paragraphs prior to class that demonstrates understanding of the material and responds to the arguments submitted by one or more other classmates. In weeks when you have another assignment due, it is not a requirement.

Completion of certificate on detecting plagiarism

Plagiarism is a violation of the university's Honor Code and is increasingly easy to detect because of the ubiquity of online text searches and the incorporation of these features into course software, such as Turnitin. But sometimes students don't understand what plagiarism is and how to avoid it in their own writing. At the start of the course we will discuss what constitutes plagiarism using an online instructional module developed by Indiana University (https://www.indiana.edu/~academy/firstPrinciples/ IUcriteria.html). Your first course assignment will be to complete the certification test found at https://www.indiana.edu/~academy/firstPrinciples/certificationTests/. You may retake the test as many times as needed. Indiana University also provides an array of tutorials to assist you.

Course project

Over the course of the term you will identify an event—or a context—in which science is relevant to the decisions before policymakers. You will describe how policymakers accessed scientific information, the barriers they experienced in doing so, and the outcome. You will make recommendations for increasing the usability of science based on your diagnoses. I encourage you to choose a case study in an area of environmental science in which you already have significant knowledge or in which you would like to build it long-term. For example, you might choose an issue related to previous papers you have written, your master's thesis or doctoral dissertation, or an area in which you might like to study or work after graduation, such as conservation biology, climate change, or energy.

You will have four assignments directly related to the course project: 1) a description of the topic you will be researching and initial resources you have identified; 2) a first draft of the research paper; 3) a final draft of the paper; and 4) a presentation to the class.

Grade distribution overview

1	Understanding plagiarism certificate	3%
2	Congressional hearing essay	7%
3	Policy memo	15%
4	Opinion article on increasing societal relevance of your scientific discipline	20%
5	Final paper: Case study	
	Assignment 1 (topic)	5%
	Assignment 2 (first draft) – *not graded, but will not receive full credit on final draft if not turned in on time*	0%
	Assignment 3 (final draft)	35%
	Assignment 4 (presentation)	5%
6	Participation in Blackboard course discussions	10%
*	*[Extra credit, Submit opinion article for publication]*	*5%*

Grades

Your final letter grade will be assessed based on the total points you have accumulated through completing the assignments. Grades will not be curved.

A	93-100	A-	90-92	B+	87-89
B	83-86	B-	80-82		
C	70-79			F	78 or less

Course Schedule (subject to change)

Week	Date	Topics	Readings
Week 1	Aug. 23	• Introductions • Course overview • **What is evidence? Why do we think it is important for decision-making?**	*Background:* National Research Council. (2012). *Using science as evidence in public policy*. National Academies Press. --Summary, p. 1-6. --Chapter 4, p. 53-63
Week 2	Aug. 30	• **Politics of evidence**  ***Mike Fisher, Federation of American Scientists***	****Due: Plagiarism certificate** Parkhurst. (2017). *The politics of evidence.* Routledge. --Chapters 1 and 2, p. 1-37.
------	Sept. 6	• **LABOR DAY**	**No class**

Week 3	Sept. 13	• **Disconnects between scientific research and policy**  ***Diana Epstein Evidence Team Lead at the Office of Management and Budget***	****Due: Congressional hearing essay** Bogenschneider, K., & Corbett, T. J. (2010). *Evidence-based policymaking: Insights from policy-minded researchers and research-minded policymakers.* Taylor & Francis Group. Available through university libraries at http://ebookcentral.proquest.com/lib/gmu/detail.action?docID=668354 --Preface, Foreword, and Chapters 1 - 2, p. ix to xvi and 1 - 54.
Week 4	Sept. 20	• **Use of natural science in policy**	Cairney, P. (2016). The science of policymaking (Chapter 1); Evidence in environmental policy: Learning lessons from health? (Chapter 4). In *The politics of evidence-based policy making.* Springer. Ingold, K., & Gschwend, M. (2014). Science in policy-making: Neutral experts or strategic policy-makers? *West European Politics, 37*(5), 993–1018.
Week 5	Sept. 27	• **Use of social and behavioral science in policy**	****Due: Policy memo** Haskins, R., & Margolis, G. (2015). Introduction: The Obama strategy for attacking social problems. In *Show me the evidence: Obama's fight for rigor and results in social policy*. Brookings Institution Press. John, P. (2014). Policy entrepreneurship in UK central government: The Behavioural Insights team and the use of randomized

			controlled trials. *Public Policy and Administration*, *29*(3), 257–267.
Week 6	Oct. 4	**Research use in legislatures**  ***Peter Blair, Schar School of Policy and Government***	Kenny, C., Washbourne, C.-L., Tyler, C., & Blackstock, J. J. (2017). Legislative science advice in Europe: The case for international comparative research. *Palgrave Communications*, *3*(1), 1–9. Sabatier, P., & Whiteman, D. (1985). Legislative decision making and substantive policy information: Models of information flow. *Legislative Studies Quarterly*, *10*(3), 395–421.
Week 7	Oct. 12 ***NOTE TUESDAY DATE***	• **Research use in executives**  ***Abigail Walter, USDA APHIS***	****Due: Assignment #1 (Topic)** Desmarais, B. A., & Hird, J. A. (2014). Public policy's bibliography: The use of research in US regulatory impact analyses. *Regulation & Governance*, *8*(4), 497–510. Jasanoff, S. (1990). *The fifth branch: Science advisers as policymakers*. Harvard University Press. --Chapter 1
Week 8	Oct. 18	• **Boundary spanning & co-production**  ***Leo Curran, Pew***	Bednarek, A. T., Wyborn, C., Cvitanovic, C., Meyer, R., Colvin, R. M., Addison, P. F. E., Close, S. L., Curran, K., Farooque, M., Goldman, E., Hart, D., Mannix, H., McGreavy, B., Parris, A., Posner, S., Robinson, C., Ryan, M., & Leith, P. (2018). Boundary spanning at the science–policy interface: The

		Charitable Trusts	practitioners' perspectives. *Sustainability Science, 13*(4), 1175–1183. Posner, S. M., & Cvitanovic, C. (2019). Evaluating the impacts of boundary-spanning activities at the interface of environmental science and policy: A review of progress and future research needs. *Environmental science & policy*, *92*, 141-151.
Week 9	Oct. 25	• **Scientific assessments**	Buizer, J. L., Dow, K., Black, M. E., Jacobs, K. L., Waple, A., Moss, R. H., Moser, S., Luers, A., Gustafson, D. I., Richmond, T. C., Hays, S. L., & Field, C. B. (2016). Building a sustained climate assessment process. In K. Jacobs, S. Moser, & J. Buizer (Eds.), *The US National Climate Assessment: Innovations in Science and Engagement* (pp. 23–37). Springer International Publishing. Farrell, A. E., Jäger, J., & VanDeveer, S. D. (2006). Overview: Understanding design choices. In A. E. Farrell & J. Jäger (Eds.), *Assessments of regional and global environmental risks: Designing processes for the effective use of science in decisionmaking*. Resources for the Future.
Week 10	Nov. 1	• **Designing information for decision-makers**	Kenney, M. A., Janetos, A. C., & Lough, G. C. (2016). Building an integrated U.S. National Climate Indicators System. In K. Jacobs, S. Moser, & J. Buizer (Eds.), *The US National Climate Assessment: Innovations in Science and Engagement* (pp. 85–96). Springer International Publishing.

			Winterfeldt, D. von. (2013). Bridging the gap between science and decision making. *Proceedings of the National Academy of Sciences*, *110*(Supplement 3), 14055–14061.
Week 11	Nov. 8	• **Public participation in environmental decision-making**	****Due: Opinion article** Thomas C. Beierle, T. C., & Cayford, J. (2002). *Democracy in practice: Public participation in environmental decisions.* Taylor & Francis Group. Hurlbert, M., & Gupta, J. (2015). The split ladder of participation: A diagnostic, strategic, and evaluation tool to assess when participation is necessary. *Environmental Science & Policy*, *50*, 100–113.
Week 12	Nov. 15	• **Evidence use in developing nations**	Biermann, F. (2002). Institutions for scientific advice: Global environmental assessments and their influence in developing countries. *Global Governance*, *8*(2), 195–219. Sanni, M., Oluwatope, O., Adeyeye, A., & Egbetokun, A. (2016). Evaluation of the quality of science, technology and innovation advice available to lawmakers in Nigeria. *Palgrave Communications*, *2*(1), 1–7.

Week 13	Nov. 15	• **Reforming government capacity for evidence use**	Graves, Z., & Kosar, K. (2018). Bring in the nerds: Reviving the Office of Technology Assessment. *R Street Policy Study No*, *128*. Milford, J. B., & Knight, D. (2017). Increasing the use of Earth science data and models in air quality management. *Journal of the Air & Waste Management Association*, *67*(4), 431–444.
Week 14	Nov. 22	• **Reforming scientific institution capacity for addressing questions of societal concern**	****Due: Assignment #2 (Paper draft)** Cairney, P., & Oliver, K. (2020). How should academics engage in policymaking to achieve impact? *Political Studies Review*, *18*(2), 228–244. Kirchherr, J. (2018, August 9). A PhD should be about improving society, not chasing academic kudos. *The Guardian*. Terämä, E., Smallman, M., Lock, S. J., Johnson, C., & Austwick, M. Z. (2016). Beyond academia–Interrogating research impact in the research excellence framework. *PloS One*, *11*(12).
Week 15	Nov. 29	• **Student presentations of case studies**	****Due: Assignment #4 (Presentations)**
Exam date	Mon., Dec. 13 4:30 – 7:10 pm	• **Upload final paper** • **Student presentations of case studies**	****Due @ midnight: Assignment #3 (Final paper)** ****Due: Assignment #4 (Presentations)**

Possible syllabus changes
As the instructor, I reserve the right to make changes to the syllabus. Students will be given ample notice regarding any major changes to the course plan.

Late assignments
Assignments turned in late will be penalized by deducting 5% from the total points for each day it is late.

Gender identity and pronoun use
If you wish, please share your name and gender pronouns with me and how best to address you in class and via email. I use "she/her/hers" for myself. You may address me as "Karen" or "Dr./Prof. Akerlof" in email and verbally. Mason provides tools to change your name and pronouns on Mason records, see https://registrar.gmu.edu/updating-chosen-name-pronouns/.

Course materials and student privacy
I will not be video recording the classes except in the case of guest speakers who have given their approval to do so. However the PPTs from each meeting will be available on Blackboard. All course materials posted to Blackboard or other course site are private to this class; by federal law, any materials that identify specific students (via their name, voice, or image) must not be shared with anyone not enrolled in this class.

- Video recordings of class meetings that include audio, visual, or textual information from other students are private and must not be shared outside the class
- Live video conference meetings (e.g. Collaborate or Zoom) that include audio, textual, or visual information from other students must be viewed privately and not shared with others in your household or recorded and shared outside the class.

General
This course adheres to all university policies described in the academic catalog. Please pay close attention to the following policies:

- **Students with disabilities**
  Disability Services at George Mason University is committed to providing equitable access to learning opportunities for all students by upholding the laws that ensure equal treatment of people with disabilities. If you are seeking accommodations for this class, please first visit http://ds.gmu.edu/ for information about the Disability Services registration process. Then please discuss your approved accommodations with me. Disability Services is located in Student Union

Building I, Suite 2500 or can be reached at ods@gmu.edu or (703) 993-2474.

- **Diversity and inclusion**
  One of the goals for the course is to create a learning environment that fosters respect for people across identities. As a class, we welcome and value individuals and their differences, including gender expression and identity, race, economic status, sex, sexuality, ethnicity, national origin, first language, religion, age and ability. We encourage all members of the learning environment to engage with the material personally, but to also be open to exploring and learning from experiences different than their own.

- **Academic integrity: Mason's Honor Code**
  At George Mason University, Academic Integrity is demonstrated in our work, community, the classroom and research. We maintain this commitment to high academic standards through Mason's Honor Code. It is an agreement made by all members of our community to not "cheat, steal, plagiarize, or lie in matters related to your academic work." Students sign an agreement to adhere to the Honor Code on their application for admission to Mason and are responsible for being aware of the most current version of the code.

  The integrity of the University community is affected by the individual choices made by each of us. Mason has an Honor Code with clear guidelines regarding academic integrity. Three fundamental and rather simple principles to follow at all times are that: (1) all work submitted be your own; (2) when using the work or ideas of others, including fellow students, give full credit through accurate citations; and (3) if you are uncertain about the ground rules on a particular assignment, ask for clarification. No grade is important enough to justify academic misconduct. Plagiarism means using the exact words, opinions, or factual information from another person without giving the person credit. Writers give credit through accepted documentation styles, such as parenthetical citation, footnotes, or endnotes. Paraphrased material must also be cited, using the appropriate format for this class. A simple listing of books or articles is not sufficient. Plagiarism is the equivalent of intellectual robbery and cannot be tolerated in the academic setting. If you have any doubts about what constitutes plagiarism, please see me.

- **Dropping the course**
  You are responsible for understanding the university's policies and procedures regarding withdrawing from courses found in the current catalog. You should be aware of the current deadlines according to the Academic Calendar.

- **Email**
  All course information will be sent to your George Mason University email account, including changes to the class schedule due to weather conditions. Students must use their MasonLive email account to receive important University information, including communications related to this class. I will not respond to messages sent from or send messages to a non-Mason email address.

- **Notice of mandatory reporting of sexual assault, interpersonal violence, and stalking**
  George Mason University is committed to providing a learning, living and working environment that is free from discrimination and a campus that is free of sexual misconduct and other acts of interpersonal violence in order to promote community well-being and student success. We encourage students who believe that they have been sexually harassed, assaulted or subjected to sexual misconduct to seek assistance and support. University Policy 1202: Sexual Harassment and Misconduct speaks to the specifics of Mason's process, the resources, and the options available to students.

  As a faculty member and designated "Responsible Employee," I am required to report all disclosures of sexual assault, interpersonal violence, and stalking to Mason's Title IX Coordinator per university policy 1412. If you wish to speak with someone confidentially, please contact the Student Support and Advocacy Center (703-380-1434) or Counseling and Psychological Services (703-993-2380). You may also seek assistance from Mason's Title IX Coordinator (703-993-8730; titleix@gmu.edu).