

## SYLLLABUS

### PSCI 2116: Introduction to Environmental Policy

Fall 2016

TR 9.30-10.45AM, CLUB4

Prof. Krister Andersson  
Office Hours: Thursdays 1-3 PM  
or by appointment

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### COURSE DESCRIPTION

On September 25, 2015, member countries of the United Nations adopted the Sustainable Development Goals—a set of goals to end poverty, protect the planet, and ensure prosperity for all. Each of the seventeen goals has specific targets to be achieved over the next 15 years. In a comment after the goals had been approved, the Secretary General of the UN, Ban Ki Moon, said that “for the goals to be reached, everyone needs to do their part: governments, the private sector, civil society and people like you”.

Moon’s statement suggests that working towards sustainable development is very much a *political process*: the achievement of sustainable development outcomes requires citizens and their politicians to come together to create policies and allocate public funds in support of these goals. To translate the lofty policy goals about sustainable development into meaningful actions on the ground is easier said than done. Coalitions among diverse political interests need to be built. And even if politicians agree that something needs to get done, hard choices must be made about which programs to fund and implement. In this course, we will try to figure out how politics can both help and hinder efforts to promote sustainable development.

Throughout the course we will uncover and discuss the multiple ways in which politics and public policies affect people's decisions and actions. We will study a variety of policy responses to sustainability issues, both governmental and non-governmental initiatives. And while this is a course offered by the Department of Political Science, our study of environmental policy will take us well beyond the normal realms of political science. The reason for this departure is simple: if we are truly interested in discovering new, more effective policies to promote sustainable development, we first need to make sure we have a solid understanding of the underlying causes of the problems we observe. By

applying insights from research in environmental sciences, economics, psychology, and engineering we can improve the accuracy of our “sustainability diagnosis”.

This course explored several major conceptual issues in the study of sustainability: systems thinking; analysis of social-environmental systems (including scale and complexity issues); the role of different kinds of knowledge; the challenges of linking knowledge with action for sustainability (including values issues); and the role of governance systems in enabling sustainability progress. To illustrate the importance of these concepts in very different contexts, the course employs tangible case study examples panel discussions, as well as applied policy work in collaboration with policy staff working for the City of Boulder and Boulder County.

One of the center pieces of the course is the work that we will be doing together with local policy makers and practitioners. Thanks to our colleagues’ willingness to work with us on addressing some of the most pressing problems related to sustainability that they face in their work, we will have a unique opportunity to apply what we learn in the classroom to a concrete public policy domain. These colleagues have prepared a set of tasks that you will be asked to work on as (pro bono) consultant teams. Your task is to work in teams to come up with a creative and practical solutions to specific sustainability-related problems identified by these colleagues. At the end of the course, we invite our colleagues to the classroom to discuss your findings.

## **LEARNING GOALS**

By the end of the class, students will be able to:

1. Recognize and articulate the role of politics in efforts to promote sustainability through public policy
2. Characterize the goals of sustainability efforts in terms of inclusive human well-being; understand the factors and assets that determine progress towards well-being; and recognize the potential for interactions, trade-offs and unintended consequences in policy efforts made for sustainability goals.
3. Identify multiple types of knowledge needed to develop sustainable solutions for particular problems.
4. Apply your skills in analyzing social-environmental systems to propose creative and practical solutions to sustainability challenges in our campus and broader Boulder communities

## **ASSIGNMENTS AND GRADES**

There are no formal prerequisites for the course. A more important, but informal prerequisite, is your willingness to work hard, show up for class, and participate actively in class activities.

The success of this course depends almost entirely on the extent to which you come prepared to each class session. For almost all sessions, there is at least one required reading assignment. I will rarely lecture in this course. Instead I will facilitate a discussion of the course material. This format requires more preparation than more traditional, lecture-based courses. As part from class discussions, expect a multiple choice or short-answer quiz in all class sessions.

Your performance in the class will be assessed on the basis of your originality, creativity, presentation, and timeliness associated with five different activities of the course, which are as follows:

1. **Exams.** There will be two major exams in this class: (1) A mid-term (**10 percent** of final grade) and (2) a comprehensive Final Exam (**20 percent** of grade).
2. **Debates or panel discussion.** Every week we will have debates about an environmental policy topic. You will be graded on your performance in these discussions, and in particular on your use of original evidence to support your arguments. This is worth **20 percent** of your final course grade.
3. **Quizzes.** Virtually every class session will begin with a quiz based on materials covered in class and readings. Your results of these quizzes will constitute **20 percent** of your final course grade. **Please, always bring your clicker to class!**
4. **Term Project.** Teams of 3-4 students will work with local government staff to produce a report on your analysis of a problem and possible solutions to that problem. Each team member will be individually responsible for a section of the group report. Your term project grade will be calculated by combining the grade for your individually-written section (70 percent) and overall group report (30 percent). The term project counts for **20 percent** of your final grade.
5. **Participation.** This grade will reflect my perception of your level of preparedness and engagement in class discussions, and the quality of your peer review of fellow student presentations. These combined count for **10 percent** of your final grade.

## GRADE BREAKDOWN

<u>Activity</u>	<u>Weights</u>
Mid-term, and Final Exams	30%
Quizzes	20%
Debates	20%
Term Project	20%
<u>Participation</u>	<u>10%</u>
TOTAL	100%

## REQUIRED TEXTBOOK

You are required to buy one book for the class (available in the bookstore as well as an ebook):

Matson, P. Clark, W., and Andersson, K. (2016). *Pursuing Sustainability: A Guide to the Science and Practice*. Princeton, NJ: Princeton University Press

The rest of the course readings will be posted on D2L.

## UNIVERSITY POLICIES

*Disability Services.* If you qualify for accommodations because of a disability, please submit to me a letter from Disability Services in a timely manner so that your needs may be addressed. Disability Services determines accommodations based on documented disabilities. Contact: 303-492-8671, Willard 322, and [www.Colorado.EDU/disabilityservices](http://www.Colorado.EDU/disabilityservices)

*Academic Integrity.* All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this institution. Violations of this policy may include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct shall be reported to the Honor Code Council (303-725-2273, [honor@colorado.edu](mailto:honor@colorado.edu)). Students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member and non-academic sanctions (including but not limited to university probation, suspension, or expulsion). Other information on the Honor Code can be found at <http://www.colorado.edu/academics/honorcode/>

*Discrimination and Sexual Harassment.* The University of Colorado at Boulder policy on Discrimination and Harassment (<http://www.colorado.edu/policies/discrimination.html>), the University of Colorado policy on Sexual Harassment and the University of Colorado policy on Amorous Relationships applies to all students, staff and faculty. Any student, staff or faculty member who believes s/he has been the subject of discrimination or harassment based upon race, color, national origin, sex, age, disability, religion, sexual orientation, or veteran status should contact the Office of Discrimination and Harassment (ODH) at 303-492-2127 or the Office of Judicial Affairs at 303-492-5550. Information about the ODH and the campus resources available to assist individuals regarding discrimination or harassment can be obtained at <http://www.colorado.edu/odh>

*Religious Obligations.* Campus policy regarding religious observances requires that faculty make every effort to reasonably and fairly deal with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class, you will need to give a minimum of a one-week advance notice

to the professor if you foresee any such time conflicts with class-related activities. See full details at [http://www.colorado.edu/policies/fac\\_relig.html](http://www.colorado.edu/policies/fac_relig.html)

*Civility.* Students and faculty each have responsibility for maintaining an appropriate learning environment. Students who fail to adhere to such behavioral standards may be subject to discipline. Faculty have the professional responsibility to treat all students with understanding, dignity and respect, to guide classroom discussion and to set reasonable limits on the manner in which they and their students express opinions. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. See <http://www.colorado.edu/policies/classbehavior.html>

## **COURSE CALENDAR**

### **Week 1: What is Sustainable Development?**

*Introduction to the Course, Syllabus, Assignments, Grades*

#### **Read:**

Brundtland, G., Khalid, M., Agnelli, S., Al-Athel, S., Chidzero, B., Fadika, L., ... & Singh, M. (1987). Our Common Future ('Brundtland report'), Chapter 1

Lomborg, B. (2003). The skeptical environmentalist: measuring the real state of the world (Vol. 1). Cambridge: Cambridge University Press, Chapter 1

#### **Discuss:**

Is Bjorn Lomborg's skepticism of environmental policy measures warranted?

### **Week 2: Learning to Speak Sustainability: Core Concepts and Applications**

#### **Read:**

Matson, Clark, & Andersson (2016), Chapter 1

#### **Discuss:**

What is the role of politics and public policy in promoting sustainability?

### Week 3: Case Studies in Sustainability

**Read:**

Matson, Clark, & Andersson (2016), Appendix (all case studies)

**Discussion:**

Based on the case studies, identify how scientists (and their students) can contribute to a more sustainable future?

### Week 4: What does a Sustainable Future Look Like in Boulder?

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**Read:**

United Nations (2015). The Lazy Person's Guide to Saving the World

City Government of Boulder (2014). Sustainability Plan 2015-2020

University of Colorado (2015). Campus Sustainability Goals.

**Presentation:**

Colleagues from the Campus, Boulder City and County present the tasks for the course term projects.

**Discuss:**

What are the main challenges and opportunities for the campus and wider Boulder to promote a more sustainable future?

### Week 5: A Framework for Analyzing Sustainability

**Read:**

Matson et al. (2016). Chapter 2

**Discuss:**

The global response to Ozone Layer thinning: What are the lessons for addressing climate change?

### Week 6: Behavioral issues in Environmental Policy

**Read:**

Carrico, A. R., Vandenberg, M. P., Stern, P. C., & Dietz, T. (2015). US climate policy needs behavioural science. *Nature Climate Change*, 5(3), 177-179.

Dietz, T., Gardner, G. T., Gilligan, J., Stern, P. C., & Vandenberg, M. P. (2009). Household actions can provide a behavioral wedge to rapidly reduce US carbon emissions. *Proceedings of the National Academy of Sciences*, 106(44), 18452-18456.

**Class Exercise:**

Compare and assess sustainability initiatives across five university campuses.

## Week 7: A Complexity in Social-Environmental Systems

### **Read:**

Matson et al., 2016. Chapter 3

### **Discuss:**

From a complex systems perspective, what are the potential costs and benefits of investing more in nuclear energy?

## Week 8: Common-Pool Resources, Experiment and Discussion

*Note: Bring laptops/smart phones—we're playing a game!*

### **Read:**

Hardin, G. (1968). The tragedy of the commons. *Science*, 162 (3859), 1243-1248.

Ostrom, E. (2008). The challenge of common-pool resources. *Environment: Science and Policy for Sustainable Development*, 50(4), 8-21.

### **Discuss:**

What are the strengths and weaknesses of Hardin's argument about the tragedy of the commons?

## Week 9: The Governance of Natural Resources

### **Read:**

Matson et al. Chapter 4

### **Discuss:**

How is the CU Campus governed and what can students do to influence decision making in the governance process?

## Week 10: Mid-term (review and exam)

MIDTERM EXAM

### Week 11: How do we make better use of science in the policy process?

**Read:**

Matson et al, Chapter 5

**Discuss:**

How can science become better at influencing decision making? How can policy making become more scientific?

### Week 12: Water Governance, Colorado Style

**Read:**

Carswell (2013). Farmers agree to tax those who deplete groundwater. *High Country News*, February 25.

Kenney, D. S. (2005). Prior appropriation and water rights reform in the Western United States. *Lessons for institutional design*, 167.

**Discuss:** Water in the West: Is federal intervention needed?

### Week 13: Clean Water and Clean Air Act

**Read:**

Rosenbaum, W. A. (2013). *Environmental politics and policy*. Cq Press (Ch 1 and 6)

**Discuss:**

Do the Clean Air and Clean Water Acts provide an adequate foundation for addressing air and water pollution today?

### Week 14: Fall Break

### Week 15: Pulling it all together: What can I do to make a difference?

**Read:**

Matson et al, Chapter 6

**Discuss:**

What can you do to contribute to the goals of sustainable development? What are the costs and benefits?



**Week 16: Student Presentation of Term Projects**

Each team presents their draft reports (15-20 min) to local government officials

**Week 17: Final Exam**

**Time and Place: TBA**