

## ENVI 382C Sustainability & Urban Policy

Fall 2016  
8:30-9:55am Tu/Th  
Science 1, 162

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**Office Hours:** Tuesday 1-2; Thursday 10-11

The modern American urban environment is undergoing rapid transformation as people reevaluate their relationships with natural and manmade environments. Living buildings and green rooftops are beginning to appear on the skylines of many major cities, and once-abandoned urban lots are being transformed into vibrant urban gardens. The phenomenon can be found in large cities, as well as smaller urban communities like Binghamton. This course presents an interdisciplinary examination of the ever-evolving concept of sustainability as it applies to modern urban rejuvenation and revitalization. Concepts explored include the relationship between a city and its natural resources, natural disaster management, environmental (in)justice, and sustainable development, among others.

The goal of this course is to get you thinking critically about urban living—in many respects, urban dwellers have a lower environmental impact than rural counterparts; in many other respects, the opposite is true. Oftentimes, actions that seem obviously bad for the environment turn out to be positive for environmental quality and, similarly, actions that appear to be good for the environment ultimately have the reverse effect. The readings and class discussions are designed to get you to challenge “conventional wisdom” on what cities are and the ways in which urban development can benefit both social and ecological systems.

The core analytical tool of this course is policy analysis—how do humanly devised “institutions”, or rules/policies, interact with ecological and technological conditions to produce outcomes? Policies designed specifically to encourage environmental stewardship may, at times, increase the rate of ecosystem destruction—removing a community from an area designated for a new park, for example, may actually increase the incidence of logging as no one has a vested stake in monitoring resource use—and policies designed for one purpose—encouraging business cost-cutting, for example—may inadvertently have positive (increased energy efficiency) or negative (increasing illegal dumping) environmental effects. In summary, *much like the complexity of a biophysical ecosystem, the institutional policy frameworks under which humans interact with the natural and built environments are extremely complex and no single policy prescription is universally “good” or universally “bad” for environmental quality.*

We will explore the concepts of public goods provisioning and public bads management within the modern urban concept. How do jurisdictional boundaries impact the provision of public services? What types of goods are best provided by voluntary associations and what types of goods are best provided by governments?

The course proceeds as an examination of the ‘city’ as it relates to human-environment interactions. The earliest cities of human civilization emerged to exploit key ecological advantages, something that continues to this day. As cities have risen and fallen throughout history, the relationship between a city and the rural areas surrounding it has constantly evolved. We will begin the course by examining this connection and how it has changed over time as population has grown and policy regimes have adapted. Thus, we will focus on the effects of the city not as an isolated unit, but rather as a locus of an interconnected network of innovators, merchants, agriculturalists, and others, who collectively define social-ecological relationships that determine environmental quality locally, regionally and globally.

Generally, course time will be devoted to unraveling the theoretical and empirical research on urban organization to help us understand the causes and consequences of current green movements. However, some days will take place outside the classroom—some of these are noted already in this syllabus, some will be added when the opportunity arises. Attendance at all activities outside of the classroom is mandatory. When a class will take place outside of the regular classroom, you will receive ample notice both in-class and through Blackboard to be aware of the new location.

### **Learning Objectives**

As mentioned above, this course is concerned with understanding sustainability from a policymaking perspective. You will engage in one large project that involves both a presentation and a written paper, but also will work on six take-home assignments. All of these assignments and readings have been selected to create a cohesive understanding of how policymaking affects social movements and vice versa. The idea is to focus on theory & history in-class, engage in contemporary topics of urban sustainability through the writing assignments, and then engage in a project of your choosing that ties course themes into an urban sustainability issues. By the end of the semester you should be able to:

1. Identify and comprehend variation in complex policymaking environments
2. Understand the linkages between institutions (rules) and behavior
3. Demonstrate proficiency in critical and constructive thought and writing
4. Demonstrate proficiency in presentation and oral communication skills
5. Effectively synthesize complex social-ecological linkages within the policymaking context

### **Due Dates**

Assignments are due at the *start* of class on the due date. Note that class starts at 8:30 am sharp. One of the most distracting events during a class is when someone rushes in after class has started in order to turn in an assignment. Or, similarly, another distraction is when someone barges into class at the end of the hour to turn in a paper at the end of class. In order to prevent this from happening, I will *strictly* enforce the 8:30 am rule. If you are five minutes late to class, simply sit down and turn in the paper at the end of class, noting that it will already be considered late, so turning it in at 9:55 is the same as 8:30.

Finishing an assignment on-time is an essential life skill in any profession. Therefore, there will be strict and serious grading deductions for any late assignment. While computers break and accidents happen, you will always have a minimum of two weeks to complete an assignment in this course. Plan accordingly; there are *absolutely* no excuses for late work. If the due date conflicts with a religious event or other important event, plan accordingly and turn it in early!

When an assignment is turned in late you will automatically lose one-third of a full letter grade (i.e. B+ to B) on the assignment per 24-hour period late.

Final papers will follow a similar penalty schedule. The due date, time, and method of turning in your final paper will be determined in-class.

## Grading

Grading for this course will be based on in-class participation, the completion of six assignments, an in-class project presentation, and a project paper. A detailed explanation of each component of your final grade is found on the next pages. Below is a break-down for easy reference.

Participation:	10%
Assignments (6 @ 10% each):	60%
Project Presentation:	5%
Project Paper:	25%

The grade ranges, based on percentages and in mathematical set notation, are as follows:  
[93%, 100%] A; [90%, 93%) A-; [87%, 90%) B+; [83%, 87%) B; [80%, 83%) B-; [77%, 80%) C+; [73%, 77%) C; [65%, 73%) C-; [0%, 65%) F.

Incompletes will only be given in rare and exceptional circumstances, at the instructor's discretion.

### ***Participation (10% of final grade)***

This is a small class. Your participation in class, through your physical presence during class hours, through your active involvement in class discussion, and through your engagement with course material is vital to your ultimate success in this course. While the instructor will not necessarily take formal attendance, he will make notes throughout the semester of who is and who is not showing up. Additionally, while you will not generally be required to prove that you did the course readings, occasionally the instructor will call on a random member of class to keep discussion going; it is essential that you complete the day's assigned readings in the event that you are called on. You will receive a mid-semester participation grade to give you an idea of how you are performing.

### ***Assignments (6 total, each worth 10% of final grade)***

Throughout the semester, you will be responsible for completing six assignments. Each of the assignments will have you, for example, listen to and reflect on a sustainability podcast, or provide a policy proposal based on a specific scenario. Each assignment will be given two weeks before it is due and will contain detailed instructions for its completion. Please pay attention to the instructions for turning in the assignment.

Please note that these assignments are to be done independently and should be indicative of your own original thoughts, ideas, and work. Therefore, while you may discuss an assignment with a classmate or friend, be certain that each of you turns in a sufficiently unique paper that draws on your own personal reflection and shows that each of you independently found additional related sources to draw upon.

### ***Presentation (5% of final grade)***

The last few class sessions of the semester are reserved for in-class presentations of your semester projects. Each student should expect to present for roughly 10-15 minutes and then prepare for 5 minutes of question and answers. More details about the presentation will be provided later in the semester.

### ***Semester Project (25% of final grade)***

Each student will be responsible for undertaking a hands-on project of a contemporary issue related to urban sustainability. You will have wide discretion on the project you choose to engage. More details will be given in class.

Please note that a project topic and justification (2.5% of final grade) is due **October 18** and an update of project progression (2.5% of final grade) is due **November 20**. The remaining 20% of your final grade assigned from the project will be based on the quality of the final submission.

**Disability-related Equal Access Accommodations** – Students who wish to request academic accommodations to insure their equitable access and participation in this course should notify the instructor by the second week of class. Authorizations from Services for Students with Disabilities (SSD) are generally required. We encourage you to contact SSD at (607) 777-2686 and to schedule an appointment with the Director or Learning Disabilities Specialist. Their website ([www.binghamton.edu/ssd](http://www.binghamton.edu/ssd)) includes information regarding their Disability Documentation Guidelines. The office is located in UU – 119.

**NO CELL PHONES USE WILL BE ALLOWED IN CLASS\***. This is a SMALL seminar class. Show respect to your fellow classmates and come to class ready to engage with the day's topic and/or material. Cell phones are simply unnecessary for this form of class and only serve as a distraction to other students.

\*Students with special needs that require a computing device should see the instructor within the first two weeks of class to discuss special accommodations.

***\*Tentative\* Daily Topics***

*Please note that this course will continually evolve as the semester unwinds. Changes to the daily schedule will be announced in-class and via email. To be certain that you are working on the correct assignment/reading, make sure to pay attention in class!*

There are two required books for this class. The Cronon book will be used heavily early in the course; the Speck book will be used heavily later in the course:

Cronon, William. 1991. *Nature's Metropolis: Chicago and the Great West*. New York: W.W. Norton & Company.

Speck, Jeff. 2012. *Walkable Cities: How Downtown Can Save America One Step at a Time*. New York: Farrar, Straus and Giroux.

Additional readings will be assigned as the semester-goes on. Urban sustainability is continually making headlines, so some readings cannot be predicted a head of time. All readings not from the Cronon or Speck books will be posted on Blackboard.

**Week 1—Introduction to Course**

Thursday 8/25—Introduction to class

*Reading:* This syllabus!

**Week 2—Introduction to Local Policy Analysis & Municipal Public Goods Provisioning**

Tuesday 8/30—Sustainability in a modern urban context

*Reading:* Jaffe (2015) “When Adding Bike Lanes Actually Reduces Traffic Delays” [on Blackboard]

Sani (2015) “A Dutch City Has Come Up with a Plan” [on Blackboard]

Daniels (2008) “Taking the Initiative: Why Cities are Greening Now” [on Blackboard]

Thursday 9/1—Introduction to policy analysis & *governance*

*Reading:* McGinnis and Walker (2010) “Institutional Analysis, Polycentricity, and Self-governance” [on Blackboard]

### **Week 3—Institutional Frameworks for Managing Complex Social-Ecological Systems**

Tuesday, 9/6—Introduction to public goods in the urban context

*Reading:* Ostrom and Ostrom (1977) “Public Goods and Public Choices” [on Blackboard]  
Public Goods & Collective Action Primer [on Blackboard]

Thursday 9/8—Institutional diversity and social-ecological systems

*Reading:* Ostrom (2005) “Understanding the Diversity of Structured Human Interaction” [on Blackboard]  
Ostrom (2009) “A General Framework” [on Blackboard]

### **Week 4—The Evolution of ‘The City’: Spatial Location and Economic Development**

Tuesday 9/13—Defining cities and urbanization

*Reading:* Marcotullio and Solecki (2013) “What is a City?” [on Blackboard]  
Turner (1893) “The Significance of the Frontier in American History” [on Blackboard]  
Cronon (1991) “Dreaming the Metropolis”

Thursday 9/15—Cities, natural resources, and trade

*Reading:* Cronon (1991) “Rails and Water”

### **Week 5—Supplying the City: Rural-Urban Networks**

Tuesday 9/20—Institutions, technology, and food

*Reading:* Cronon (1991) “Pricing the Future: Grain”  
Cronon (1991) “Wealth of Nature: Lumber”  
Cronon (1991) “Annihilating Space: Meat”

Thursday 9/22—Cities, natural resources, and wealth

*Reading:* Cronon (1991) “Gateway City”  
Bloom et. al (2008) “Urbanization and the Wealth of Nations”  
Rees and Wackernagel (1996) “Urban Ecological Footprints”

### **Week 6—Managing Social-Ecology I: Theory**

Tuesday 9/27—The importance of ‘fit’ & Public goods provision: government

*Reading:* Galaz et al. (2008) “The Problem of Fit among Biophysical Systems”  
Folke (2006) “Resilience: The Emergence of a Perspective for Social-Ecology”

Thursday 9/29—Public goods and ecological development

*Reading:* Costanza et al. (1997) “The Value of the World’s Ecosystem Services”  
Marshall (2013) “Transaction Costs, Collective Action, and Adaptation”

### **Week 7—Managing Social-Ecology II: I=PAT and Resource Accounting**

Tuesday 10/4—NO CLASS (Fall Break)

Thursday 10/6—I=PAT

*Reading:* TBD

### **Week 8—Green Infrastructure and Stormwater Management**

Tuesday 10/11—Stormwater management

*Reading:* Look through NYC DEP website for stormwater  
MacPhearson et al. (2014) “Urban ecosystem services for resilience...in NYC”

Thursday 10/13—Solving the stormwater externality problem: Green Infrastructure

*Reading:* Green et al. (2012) “ID and Induction of Capital through Stormwater Mgmt”

### **Week 9—Population, Food, and the Global Implications of Urbanization**

Tuesday 10/18— Food security and food challenges

*Reading:* Godfray et al. (2010) “Food Security: The Challenge of Feeding 9 Billion People”  
Juhola (2012) “Food Systems and Adaptive Governance”

Thursday 10/20— Population growth and urban-rural consumption

*Reading:* Satterthwaite (2009) “Population Growth and Implications for Climate Change”  
Alcott (2012) “Population Matters in Ecological Economics”

### **Week 10—Environmental (In)Justice**

Tuesday 10/25—Origins of environmental (in)justice

*Reading:* Rosenbaum (2012) “Environmental Justice”

Thursday 10/27—Social-ecology & public goods provision in an environmental justice context

*Reading:* Boone and Fragkias (2013) “Connecting Evi. Justice, Sustainability, and Vulnerability”  
Lee and Mohai (2012) “Env. Justice Implications of Brownfield Redevelopment”

### **Week 11—“Natural” disasters? Governing contingent events**

Tuesday 11/1—“Natural” disasters?

*Reading:* Gunderson (2010) “Ecological and Human Community Response to Natural Disasters”  
Layzer (2012) “Hurricane Katrina Hits New Orleans”

Thursday 11/3—Response to exogenous shocks

*Reading:* Thompson and Hurlston (2012) “Public-private Partnerships in Env. Governance”  
Faber (2015) “Superstorm Sandy and the Demographics of Flood Risk in NYC”

### **Week 12—Walkable Cities**

Tuesday 11/8—Walkable cities I

*Reading:* Speck, Jeff (2012) “Walkable Cities”

Thursday 11/10—Walkable cities II

*Reading:* Speck, Jeff (2012) “Walkable Cities”

### **Week 13—Economic & Environmental Opportunities: Sustainable Growth**

Tuesday 11/15—Sustainable Dubuque

*Reading:* Look over “Sustainable Dubuque” website and related sites  
(<http://www.cityofdubuque.org/index.aspx?NID=606>)

Thursday 11/17—Sustainable Building Design

*Reading:* Schilling and Logan (2008) “Greening the Rust Belt”

### **Week 14—Thanksgiving Week**

Tuesday 11/22—Make-up day

*Reading:* TBD

Thursday 11/24—NO CLASS (Thanksgiving)

### **Weeks 15 & 16**

Project Presentations