



V515: Planning for Climate Change and Resilient, Urban Communities

Instructors

Aaron Deslatta, PhD adeslatt@indiana.edu 312-841-2770

Scott Burgins rburgins@indiana.edu 812-272-3620

Office hours by appointment.

Class Schedule

May 18-May 29 M-F: 9:30-11:30 a.m./ 1:00-3:00 p.m.

Course Description

This course introduces the scientific basis, tools and processes for urban responses to climate change. It includes strategies and technological solutions, coupled with tactics for enhancing social, political, technical and fiscal capacity-building in communities. The two-week course includes a strong service-learning component as students conduct interviews and prepare a case study of a Midwestern community which has launched an environmental sustainability program. Students will be required to attend a meeting in April hosted by IU's Environmental Resilience Institute (ERI) to go over the parameters of this service-learning component.

Learning Outcomes

- Understand the concepts of climate resilience and vulnerability, the planning cycle and strategies for urban climate resilience.
- Recognize climate change impacts in developing and developed cities and the linkages of climate change with development goals and resilience.
- Acquire skills to characterize the different ways cities are mitigating their exposure to climate change or adapting to its impacts.
- Practice the main components of planning for climate change through targeted exercises on their respective city contexts.
- Identify the vulnerable sectors in a given urban context; identify, evaluate and prioritize mitigation and adaptation actions within a local climate change action planning framework.
- Assess the potential for green infrastructure investments within communities, in accordance with the local climate planning framework.
- Gain insight into the roles and motivations for key stakeholders and techniques to communicate effectively in writing and in person with stakeholders.
- Experience working directly with local groups implementing sustainability action plans.

Textbook

Planning for Climate Change: A Reader in Green Infrastructure and Sustainable Design for Resilient Cities, Infield, Elisabeth M. Hamin, Yaser Abunnasr and Robert L. Ryan, eds. Routledge, 2018. ISBN-13: 978-0815391685

Class Format

Morning Session (9:30 am-11:30 am): Dr. Deslatte introduces a topic including background, available technologies, challenges and possible solutions (including managing performance/results). *Emphasis: Strategic management/performance from the perspective of the chief executive/sustainability officer/city administrator.*

Afternoon Session (1 pm-3 pm): Instructor Burgins follows up on same topic covering planning, capacity building and barriers. *Emphasis: Planning processes, capacity-building, implementation barriers (migrating to the site level, wherever possible).*

Service-Learning Component

Students will be working with IU's Environmental Resilience Institute (ERI) to implement a service-learning opportunity in sustainability and resilience. Students gain experience with sustainability and resilience practitioners and projects, interviewing, and technical and public-facing writing. As a final project, students will gain experience with sustainability and resilience practitioners and projects, interviewing, and technical and public-facing writing as they author and publish a case study for ERI's website.

Grade Breakdown

Participation	20%
Daily Check-ins	15%
Scenario Responses	20%
ERI Case Study	25%
Study Presentation	20%

Participation: Just like it sounds. We are going to be in a small and fast-moving boat together, and everyone has to row.

Daily Check-ins: We'll have reading assigned on most nights, and a very brief quiz each morning that covers those readings.

Deliverables: This is where you get to test your new skills and tools. Your group will be given a detailed scenario and then a problem to solve.

Case Study: You will have to produce a case study of the project of high-enough quality to be published on ERI's Website.

Case Presentation: Your 5 minutes to shine during our last class together. Spend those precious minutes explaining to the class the problems and solution posed by the case.

Academic Integrity

You know the drill. No form of academic dishonesty will be tolerated. This course requires individual integrity and professionalism from all students. If academic dishonesty is proven, you will receive a grade of zero for the work; repeat offense is grounds for failure in the course. A website defining plagiarism, with examples of acceptable and unacceptable ways to give credit for the ideas and words of others, and a separate self-test is available online. You are responsible for understanding the concept of plagiarism and for avoiding it at all times. Plagiarism is not acceptable in group or individual work.

Main plagiarism web site: <http://www.indiana.edu/~istd/>

Self-test: <http://www.indiana.edu/~tedfrick/plagiarism/item1.html>

Course Grades

The syllabus lists the minimum number of points needed over the course of the semester to earn a specific letter grade. ***This minimum number of points is an absolute threshold: a student either crosses the threshold into the next highest grade or stays at the lower grade (regardless of how close he or she is to that next higher grade).***

The instructors will respond with a courteous “no,” to any requests to move someone to a higher grade at the end of the semester because you are “*really, really close*” to that higher grade. Changes like these compromise the integrity of everyone’s grade, and force the instructor to draw inconsistent, unfair, and sometimes arbitrary lines about what is “good enough.”

Major Disruptions in Your Life

Some of you, for whatever reasons, may find yourselves facing more than you can easily handle during the course. It may be something wonderful, or it may be something terrible, but it will make it difficult or impossible for you to focus, work, think, or otherwise deal normally with the course.

Whatever may have happened, please remember that the Health Services folks have people whose primary job is helping students survive such problems, and your professors are aware that these things can happen. We try to be flexible and helpful about disruptions, although we will want a justification (without personal details) for doing so. If the disruption continues for any substantial length of time, remember that the university allows us to grant incompletes so that students can complete work when their semesters are interrupted. But bear in mind that

you must request an incomplete before your grades have gone over the edge, which means communicating with us in the midst of the chaos.

It's easier to help if we know something is going on. Please try to be in touch as soon as you can - it makes it easier for all of us in the long run, even if it is difficult in the short run to bring yourself to talk about it. You don't owe us the details – just a message that life has become difficult or complex and some idea of what kind of timeframe you think might be involved will help us to help you best.

General Sources of Student Support

Disability Services for Students. Securing accommodations for a student with disabilities is a responsibility shared by the student, the instructor and the DSS Office. For information about support services or accommodations available to students with disabilities, and for the procedures to be followed by students and instructors: <http://studentaffairs.iub.edu/dss/>.

Counseling and Psychological Services (CAPS). Dr. Chris Meno (cmeno@indiana.edu) is available to work with SPEA students; other CAPS staff are also available at the Student Health Center. Dr. Meno works specifically with SPEA and has office hours in the building. An after-hours crisis line is at 812-855-5711, option 1.

Students in Financial Crisis. The Student Advocates Office can help students work through personal and academic problems as well as financial difficulties and concerns in order to help students progress towards earning a degree. In addition to advising student on appeal and financial issues such as financial aid or tuition, they also have emergency funds for IU students experiencing emergency financial crisis. <https://studentaffairs.indiana.edu/student-advocates/>

As your instructors, one of our responsibilities is to help create a safe learning environment on our campus. Title IX and our own Sexual Misconduct policy prohibit sexual misconduct. If you have experienced sexual misconduct, or know someone who has, the University can help.

If you are seeking help and would like to speak to someone confidentially, you can make an appointment with:

The Sexual Assault Crisis Service (SACS) at 812-855-8900

Counseling and Psychological Services (CAPS) at 812-855-5711

Confidential Victim Advocates (CVA) at 812-856-2469

IU Health Center at 812-855-4011

For more information about available resources:

<http://stopsexualviolence.iu.edu/help/index.html>

It is also important that you know that federal regulations and University policy require me to promptly convey any information about potential sexual misconduct known to me to our campus' Deputy Title IX Coordinator or IU's Title IX Coordinator. In that event, they will work with a small number of others on campus to ensure that appropriate measures are taken and resources are made available to the student who may have been harmed. Protecting a student's privacy is of utmost concern, and all involved will only share information with those that need to know to ensure the University can respond and assist.

I encourage you to visit stopsexualviolence.iu.edu to learn more.

Fire and tornado procedures

In case of fire, unless otherwise directed, exit A221 towards 10th Street using the front entrance of the graduate wing. In case of tornado, the inside corridors on the second floor are safe places.

Daily Schedule

Class	Theme	Topic	Learning Objectives	Before Class
Day 1a	GHG Mitigation	Discussion: An Overview of Climate Change and Urban Responses/ The Greening of Buildings, Infrastructure and Space	Scientific, policy bases for urban response to climate change; delineation between high- and low-capacity cities and policy responses.	Read: P4CC, pgs. 9-39; Skim: Hughes book chapter: 'Progress or Pipe Dream? Cities and Climate Change Mitigation' from <i>Repowering Cities</i> , 2019.
Day 1b		Scenario Planning: Case Study: Toolbox: Sermon: Humble Thyself		ICMA 2015 Local Government Sustainability Practices Survey (Summary Report).
Day 2a		Discussion: GHG Emissions Inventories/Climate Action Plans	Municipal/community contributions to GHG footprint; linking emission inventories/CAPs.	Read: P4CC, pgs. 51-88; Skim: ICLEI – 'U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions.' Chapters 1-4.
Day 2b		Scenario Planning: Case Study: Guest Speaker: Toolbox: Assign:		Pasadena CAP, chapters 1-4
Day 3a		Discussion: Climate Change, Health and Co-Benefits/Stakeholder Engagement/Communication	Health, fiscal co-benefits of GHG reduction; need for	Read: P4CC, pgs. 98-103;

			political, technical and fiscal capacity-building	Skim: Wang et al 'Capacity to Sustain Sustainability: A Study of U.S. Cities.'
Day 3b		Scenario Planning: Case Study: Guest Speaker: Toolbox: Assign:		Deslatte et al-2020-'Routines and Meta-Routines: Managing Sustainability Performance and Functional Fragmentation in Local Governments'
Day 4a	Adaptation and Resilience	Discussion: An Overview of Managing Risks of Extreme Events, Disasters and Adaptation to Climate Change	Understanding resiliency and equity; Enhancing social, environmental, economic capacities.	Read: P4CC, pgs. 107-128; Skim: Meerow.Woodruff-2020-APA-'Seven Principles of Strong Climate Change Planning'
Day 4b		Scenario Planning: Case Study: Guest Speaker: Toolbox: Assign:		
Day 5a		Discussion: Spatial/Temporal Changes in Social Vulnerability	Nexus between natural hazards, pop. density & social vulnerability; U.S. regions of concentration.	Read: P4CC, pgs. 129-136; Skim: "Resilient Houston" Chapters 1-2.
Day 5b		Scenario Planning: Case Study: Guest Speaker: Toolbox: Assign:		
Day 6a		Discussion: Social Inequality: Closing the Climate Gap	Disproportionate impacts of CC on communities of color/low SES; regional vs. targeted policies.	Read: P4CC, pgs. 138-148, 160-164; Skim: Opp -2017- "The forgotten pillar: a definition for the measurement of social sustainability in American cities." Schrock, et al- 2016- "Pursuing equity and justice in a changing climate: Assessing equity in local climate and sustainability plans in US cities."
Day 6b		Scenario Planning: Case Study: Guest Speaker: Toolbox: Assign:		
Day 7a		Discussion: Social-Ecological Resilience	Sustainability vs. resilience; benefits of	Read: P4CC, pgs. 151-159;

			ecological and social diversity, redundancy.	Skim: “Resilient Houston” Chapters 3, 5.
Day 7b		Scenario Planning: Case Study: Guest Speaker: Toolbox: Assign:		
Day 8a	Green Infrastructure and Urban Form	Discussion: Urban Heat and Storm water	Challenges and opportunities for managing water and heat (GI Design approach to emphasize trees, green roofs/facades, open space).	Read: P4CC, pgs. 221-270; Skim: Article ‘NYC’s roofs are getting a sustainable makeover, but is green or solar better?’
Day 8b		Scenario Planning: Case Study: Guest Speaker: (<i>tent.</i>) Prof. Sarah Mincey Toolbox: Assign:		
Day 9a		Discussion: Sea Level Rise and Coastal Risks	Principles for adapting coastal land use and infrastructure for sea level rise.	Read: P4CC, pgs. 283-315;
Day 9b		Scenario Planning: Case Study: Guest Speaker: Toolbox: Assign:		
Day 10	Presentations by students			