A4825 SUSTAINABILITY & PRESERVATION

Spring 2020 - Tuesdays, 11:00am-1:00pm, 409 Avery

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Course Description and Rationale

This course envisions a future for preservation that more directly addresses the environmental, social, and economic issues compounded by both climate change and unsustainable practices in how we develop and manage the built environment.

The built environment is one of the most egregious culprits in relation to climate change, energy and resource consumption, waste generation, and landscape destruction. But shifts in the way we physically develop and regulate the built environment are not only driven by and associated with climate and ecological issues, they are inextricably linked to questions of social-economic equity and inclusion/exclusion. In the face of sea level rise and increasing storm surges, desertification and deforestation, migrating populations and demographic changes, diminishing resources and global North-South imbalances, we must change the existing built environment to better serve society and the planet. Rather than compelling the future to conform to an unsustainable past, we have an affirmative obligation to spur innovation and transformation. Historic resources especially – as the elements of the built environment that are designated for survival – should be models of adaptation and equity in the face of evolving contexts and conditions. Improved integration of preservation within a broader agenda for sustainability, however, will require a new set of priorities and trade-offs that balance the range of environmental, economic, and social concerns with traditional preservation values.

Through an examination of history and theory along with inquiries into contemporary conditions and practice, this course will analyze the shared and conflicting values at the nexus of preservation and sustainability. It will explore key issues on the horizon that the preservation field must confront, including but not limited to energy performance and resource consumption, the reduction of greenhouse gas emissions, design for deconstruction, renewable energy production and cultural landscapes, adaptation *in situ*, forced migration and planned relocation/managed retreat, and resiliency planning and disaster preparedness. A particular focus will be placed on questions of inclusion, shared decision-making, and the distributive effects on communities as preservation grapples with these issues through policy and practice.

Course Format and Aims

To ensure a robust interplay between theoretical and practical questions, this course will take a hybrid learning approach that combines *issue framing* lectures and discussions that examine concepts, along with *case explorations* that analyze applied policy and technologies. The course will consider the sustainability-preservation nexus from environmental, social, and economic perspectives. It will likewise cover a range of scales, from national, state, and local communities to regional and local landscapes to individual sites and buildings. Emphasis will be placed on developing evidence-based approaches to supporting sustainability through preservation.

Course Requirements

Case Explorations: Student-led presentations and discussions that explore sustainability and preservation through policy and practice lenses will occur throughout the semester. It is anticipated that each case will be

analyzed and presented jointly by a pair of students, and each student is required to participate in four (4) cases as one of a pair. If a student prefers to undertake a case independently, he/she/they may sign up for both case slots, and this will fulfill two (2) case requirements. Sign-up for the first cases will take place during the first class on January 21. Sign-up for the remaining cases will be via Google sheet here, beginning on Friday, January 24 at 1pm. A rubric for each case exploration topic will be distributed in class and posted on Courseworks two (2) weeks before the scheduled in-class presentation.

Readings and Class Participation: Required background readings are assigned for each class session. Even when a student is not presenting a case exploration, he/she/they is expected to do the background reading(s) included in this syllabus and to ask questions and engage in the discussion. Given the interactive nature of the course, attendance is required. If a student must miss a class, please advise the instructor in advance.

Op-Ed: Promoting collective action toward sustainability requires effective communication with multiple publics. Each student is required to write an op-ed piece communicating an opinion related to evolving preservation policy and/or practice toward sustainability. The piece should be between 700 and 1200 words, and should follow the guidelines outlined here by *New York Times* op-ed contributor Bret Stephens.

Grading

Cases:	60%
Class Participation:	20%
Op-Ed:	20%

Course Schedule

Jan 21	Course Introduction and Overview
Jan 28	*Issue Framing*: Climate Adaptation and Resilience
Jan 31	*Site Visits*: Flood Adaptation in NYC
Feb 4	*Case Exploration*: Resilience Planning + Flood Adaptation: State-Local Policy
Feb 11	*Case Exploration*: Flood Adaptation: Sites + Buildings
Feb 18	*Case Exploration*: Beyond Adaptation: Loss and Migration
Feb 25	*Issue Framing*: Urban Growth, Land Use, and Density
Mar 3	*Case Exploration*: Growth and Density Regulations and Incentives
Mar 10	*Issue Framing:* Circular Economy, Waste, and Deconstruction Guest lecture: Allison Arlotta
Mar 24	*Issue Framing*: Energy
Mar 31	*Case Exploration*: Renewable Energy Geographies
Apr 7	*Case Exploration*: Energy Policy
Apr 14	*Case Exploration*: Energy Retrofits
Apr 21	*Case Exploration*: Green Rating Systems
Apr 28	Course Conclusions
May 1	Op-Ed Due

Case Explorations

date	topic	case	student 1	student 2
Feb 4	Flood Adaptation: State-Local Policy	Maryland (Annapolis)		
		Florida (Miami Beach)		
		Louisiana (New Orleans)		
		Massachusetts (Boston)		
Feb 11	Flood Adapation: Sites and Buildings	Flood Vents and Storm Drainage		
		Flotation Systems		
		Cisterns		
		Elevation		
		Relocation		
Feb 18	Beyond Adaptation: Loss and Migration	Alaska		
		Louisiana		
		Marshall Islands		
		Sahara		
Feb 25	Growth and Density Regulations and Incentives	Minneapolis, Minnesota		
		Houston, Texas		
		Denver, Colorado		
		Portland, Oregon		
		London, England		
Mar 31	Renewable Energy Geographies	Wind		
		Solar		
		Hydro		
		Biofuel		
Apr 7	Energy Policy	New York, New York		
		Los Angeles, California		
		Tokyo, Japan		
		Edinburgh, Scotland		
Apr 14	Energy Retrofits	Energy Audits + LCA		
		Performance Modeling		
		Green Roofs		
		Photovoltaics		
		Insulation		
Apr 21	Green Rating Systems	LEED BD+C		
		LEED O+M		
		Green Globes - Construction		
		Green Globes - Existing Buildings		
		Living Building Challenge		