

# RESILIENT FUTURES

## Reimagining Habitation in Energy Country

*Themes: Climate Change, Migration, and Environmental Justice*

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Housing for Oklahoma refugees. California. 1936. Dorothea Lange. New York Public Library. CC 1.0 Universal Public Domain.

*On the afternoon of Monday, May 20, 2013, an EF5 tornado devastated Moore, Oklahoma, killing 24 people, destroying 1,100 homes, and causing \$2 billion in damage. Such climate-related disasters have indeed increased by 83 percent in the past 20 years (UN 2020); in 2017, alone, there were nearly 19 million people displaced within their home countries due to natural hazards and climate-related conditions (UN Refugee Agency).*

*This class asks: How might architects, scientists, artists, and activists partner to creatively and critically address the pressing need to reimagine habitation amid a changing climate in Energy Country?*

### Course Description

The University of Oklahoma is located inside of a geographic triangle formed by Oklahoma City, Tulsa, and Ardmore, Oklahoma, which encompasses several rural and urban districts and Tribal land areas. We define this area as Energy Country, which is one of the largest oil-and-gas producing regions in the US and at the crossroads of the economic activity of the contiguous United States. Energy Country's pipeline and regional power infrastructure serves the rapidly growing areas of North Texas, extends to the agricultural producing regions to the north, and includes transportation thoroughfares connecting the eastern US to the West. Meanwhile, Energy Country is situated within Tornado Alley, an area of the U.S., with higher-than-average frequency of severe weather events. Furthermore, this area is among the most popular for resettling refugees, due to its number of faith-based nonprofits. For example, more than 1,000 Afghan refugees were resettled in Oklahoma City alone following the end of the Afghanistan War. This confluence of critical energy infrastructure, climate and weather-related vulnerabilities, and enthusiasm for accepting refugees establishes Energy Country as an important case study for imagining resilient habitation strategies that take into account climate change and migration from an environmental justice perspective.

The scope of the challenge presented by climate change, migration and habitation in Energy Country requires a coalition of climate scientists, artists, social scientists, architects, designers and activists. Simply having the scientific knowledge to address the challenge is not nearly enough. It will require knowledge from the social sciences on the ways in which policies, demographics and economics influence individual and community responses. The challenge will require knowledge from the humanities that helps us understand and interpret the human dramas unfolding, and work in the arts that inspires understanding, empathy, outrage and action. Architects and designers are the skilled collaborators needed help draw together this diverse expertise to propose workable solutions. To this end, this course brings together knowledge on climate change from these diverse perspectives in order to generate the visionary and interdisciplinary design proposals we will need to address these challenges.

Taught by instructors with backgrounds in architecture and cultural geography, and with perspectives from more than a dozen guest scholars and practitioners, the course models the value of multidisciplinary expertise and perspectives when designing high-impact solutions. Moreover, the structure of the course will foster collaborative proposals designed to bring this knowledge to bear on facets of this complex challenge. The course is designed for upper division undergraduate students and graduate students in architecture, environmental sustainability, engineering, political science urban studies, geography, cultural anthropology, and related disciplines.

## Innovation Within OU's Institutional Setting

The University of Oklahoma is home to NOAA's National Weather Center (NWC), as well as the federally-funded South Central Climate Adaptation Science Center (SC-CASC) and Southern Climate Impacts Planning Program (SCIPP), the Institute for Resilient Environmental & Energy Systems (IREES), Institute for Quality Communities (IQC), National Institute for Risk and Resilience (NIRR), Data Institute for Societal Challenges (DISC) and the Humanitarian Innovation Research Group (HIRG). This class innovates within the OU institutional setting by bringing together experts from all of these diverse centers and institutes around the central question of habitation amid a changing climate within the Resilient Futures class during a full-day symposium. Not only will these experts share expertise with one another and with our students, but they will forge connections across disciplines that extend beyond the class and into their work as planners, scientists, designers, and policymakers.

## Workplan For Course Development & Implementation

The organization of this course is modelled on the National Science Foundation Convergence Accelerator (CA) framework. The CA program brings together multidisciplinary teams to accelerate use-inspired research in areas of strategic importance, producing high-impact deliverables. In alignment with the CA program, "Resilient Futures" class brings together passionate experts around critical issues of energy, climate, resilience, and housing (no idea or solution is too big!), and provides the intellectual resources and structure necessary to support students as they refine and revisit their ideas. Throughout the term, students will develop comparative case study analyses of urban resilience frameworks in light of what they've learned in class. To accomplish this, the course is organized into six parts.

PART I: Environment & Society (2 weeks) – This section is focused on core readings related to climate change, migration and environmental justice from the sciences, social sciences, and humanities. This portion of the class provides a solid foundation for deeper conversations about evidence-based design and policy solutions. Readings in this section include "Faustian Economics" (Berry) and "The myth of a wilderness without people" (Dowie). Student deliverable: Explore comparative case study ideas.

PART II: Climate, Migration & Habitation (3 weeks) – This section focuses on climate migration, habitat loss, contemporary histories of migration, as well as recent international diplomacy-related migrations, leading to thousands of migrants resettling in Oklahoma and Texas following the end of the Afghanistan war. Readings in this section include Colven's work on flood mitigation, Cohen's historical work on migration, and Sassen's work on habitation loss and migration.

Part III: Resilient Futures Symposium (1 week) – A special all-day event affiliated with the course and comprised of guest lecturers representing OU's premiere research centers, including the NWC, SC-SCASC, SCIPP, IREES, NIRR, HIRG, IQC, DISC as well as the School of Visual Arts, College of Journalism and Mass Communication, Divisions of Architecture and Landscape Architecture, and Dept. of Geography and Environmental Sustainability. More than a dozen presenters will share their research and creative activity and explore where their expertise overlaps. "Resilient Futures" students will attend, ask questions, network, and carry with them perspectives gained during the symposium through the remainder of the semester. The Symposium will be recorded and made available open-access online in perpetuity. Student deliverable: Reflection essay on RF symposium

PART IV: Community Responses to Resiliency (3 weeks) – This section focuses on historic case studies of community responses to resiliency in the face of disasters through the lens Rebecca Solnit's *A Paradise Built in Hell*, as well as Noyori-Corbett's work on resettlement of refugees in Texas and Oklahoma. Student deliverable: Comparative case study rough draft

PART V: Building Resilience (4 weeks) – This section focuses on the role of social capital in post disaster recovery and explores specific factors that contribute to strengthened or weakened social capital. Key readings include Aldrich's *Building Resilience*.

PART VI: Applying Theories of Community Resilience (2 weeks) – The class will close by inviting students to draw together the lessons learned and apply it to specific case studies through interactive and interdisciplinary design charettes set in Energy Country. Student deliverable: Comparative case study presentation

**Learning Objectives.** *At the conclusion of this course, students will be able to:*

- Explain the causes of climate change and the predicted effects on the inhabitability of Energy Country
- Critique and analyze case studies on climate, migration and housing problems from interdisciplinary perspectives
- Work in a multidisciplinary team to identify and propose design solutions to complex problems

## Proposed Revisions

The proposed course builds significantly on the first-ever “Resilient Futures” course taught during Spring 2022 at the University of Oklahoma (view the 2022 Resilient Futures symposium [here](#)). First, the course now scaffolds students toward applying theories of community resilience (part VI), in which students apply what they have learned in interdisciplinary design charrettes during the final two weeks. Furthermore, the course will integrate more diverse perspectives in the all-day symposium, including additional Indigenous and African American representation, as well as additional representation from energy management experts. Additionally, the course reading list and accompanying discussions have been revised in order to emphasize social capital and place-based knowledge.

## Select Readings & Resources

### Part I: Environment & Society

- Berry, Wendell. 2008. “Faustian Economics.” *Harpers*. <https://harpers.org/archive/2008/05/faustian-economics/>.  
Dowie, Mark. 2019. “The myth of a wilderness without humans.” *The MIT Press Reader*. ([Link](#))  
Kolbert, E (October 5, 2020) Three Scenarios for the Future of Climate Change. *The New Yorker* ([Link](#))

### Part II: Climate, Migration and Habitat

- Sassen, S. “A Third Space: Neither Fully Urban Fully of the Biosphere,” in *Climates: Architecture and the Planetary Imaginary*, James Graham and Caitlin Blanchfield, eds. New York: Lars Muller Publishers, 2016.  
Cohen, Robin. *Migration: The Movement of Humankind from Prehistory to the Present*. Wellbeck, 2020.  
Lustgarten, A. 2020. “How Climate Change Migration Will Reshape America.” *The New York Times Magazine* ([Link](#))

Part III: Resilient Futures Symposium: A special all-day event affiliated with the course and comprised of guest lecturers representing OU’s premiere research centers. Minimum of 15 expert, interdisciplinary speakers anticipated.

### Part IV: Community Responses to Resiliency

- Noyori-Corbett, Chie and David P. Moxley, “Using the Visual Arts to Form an Intervention Design Concept for Resettlement Support Among Refugee Women” in *Families in Society*, 99 (1).  
Solnit, Rebecca. *A Paradise Built in Hell: The Extraordinary Communities That Arise in Disaster*. Penguin, 2010.

### Part V: Building Resilience

- Aldrich, Daniel P. *Building Resilience: Social Capital in Post-Disaster Recovery*. Illustrated edition. The University of Chicago Press, 2012.  
Henderson, M., A. Person, R. Pepler. “Constructing Green Cities in the Central United States,” in *Southern Climate Monitor* (8) 1, pp. 2-6. ([Link](#))

### Part VI: Theories of Community Resilience

- Cutter, Susan L. *et al.* “A Place-Based Model for Understanding Community Resilience to Natural Disasters.” *Global Environmental Change*, 18, no. 4 (October 1, 2008): 598–606. <https://doi.org/10.1016/j.gloenvcha.2008.07.013>.  
Tuck, E. (2009). “Suspending damage: A letter to communities.” *Harvard Educational Review*, 79(3), 409–427. <https://doi.org/10.17763/haer.79.3.n0016675661t3n15>.  
Vale, L. and T. Campanella. 2005. “Axioms of Resilience,” in *The Resilient City: How Modern Cities Recover from Disaster*. Oxford University Press.