

Instructor: Gavin Smith

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Office: New East, Room 302

Office Hours: Wednesday 1-3 or by appointment

Class Location: New East, Room 102

Class Time: Wednesday 5:00-6:00

Seminar Overview:

Invited practitioners and scholars will discuss a range of pertinent topics, including research findings, experience in practice, and the translation of knowledge to action. Speakers are drawn from federal, state, and local jurisdictions; scholars from pertinent fields of study, including physical and social scientists; private sector representatives, including corporations, insurance officials, developers, and consultants; members of the media; politicians; environmental and social justice advocates; community leaders; members of various professional associations; and others as identified.

Course Objectives:

- 1) Gain insights from natural hazards and disaster scholars and practitioners that may not be obtained in other Graduate Certificate Program coursework and research, including applied practice-based knowledge, awareness of job opportunities, and the most pressing needs in the field.
- 2) Develop an “esprit de corps” among students through an exposure to leaders in the field.
- 3) Gain a greater understanding of the link between the state of our natural environment and the effects of natural hazards and disasters on human settlements.
- 4) Gain a greater understanding of the management of natural hazards and disasters, including how nations, cities, communities, and organizations prepare for, respond to, mitigate against, and recover from extreme events.
- 5) Understand the translation of knowledge generation to practice through applied research and experiential educational opportunities for students participating in the certificate program.

Course Format:

This course is intended to expose students to a range of scholars, practitioners, and translational experts in the field and help foster an esprit de corps among those pursuing the Graduate Certificate in Natural Hazards Resilience. It is also intended to introduce prospective students and interested faculty to a range of topical issues spanning natural hazards, disasters, and climate change adaptation. Students are required to attend each lecture and participate in group discussions with invited guests and the instructor, to include assigned readings.

Student Evaluation:

Class participation (general class discussion/interaction with invited guests) 100% of total grade

Assignments/Expectations:

Read required assignments and participate in class discussions, including those led by guest speakers and instructor.

Reading List:

Required reading materials will be available in digital format in the course folder. Additional readings may be assigned by guest speakers in advance of their lecture.

Course Outline

In addition to discussing a specific topical area as identified in the syllabus, each speaker has been asked to discuss their own career trajectory, their area of specialization, and insights tied to issues such as the translation of research to practice, the use of research and data in policymaking, and issues/challenges/opportunities facing future graduates. This informal discussion will be held during our regularly scheduled class.

Speakers and Topical Areas

Session 1 (January 10): Course Introduction. The first class will involve a review of the course. Students will introduce themselves, including their major, academic interests, future aspirations, and why they chose to enroll in the course. This will help me and the speakers tailor their remarks to student's interests, when possible.

Speaker: none

Session 2 (January 17): Rescheduled due to winter weather.

Session 3 (January 24): The Role of Social Science Research in Advancing our Understanding of Disasters (Confirmed).

Lori Peek is Professor of Sociology and Director of the Natural Hazards Center at the University of Colorado-Boulder. Dr. Peek studies vulnerable populations in disaster and is author of *Behind the Backlash: Muslim Americans after 9/11*, co-editor of *Displaced: Life in the Katrina Diaspora*, and co-author of *Children of Katrina*. *Behind the Backlash* received the Distinguished Book Award from the Midwest Sociological Society and the Best Book Award from the American Sociological Association Section on Altruism, Morality, and Social Solidarity. *Children of Katrina* received the Best Book Award from the American Sociological Association Section on Children and Youth and the Alfred and Betty McClung Best Book Award from the Association for Humanist Sociologists, and was named a finalist for the Colorado Book Awards. In addition to the recognition for her scholarship, Dr. Peek received the Board of Governor's Excellence in Undergraduate Teaching Award, which is the highest teaching honor bestowed at Colorado State University.

Dr. Peek is past Chair of the American Sociological Association Section on Environment and Technology and is currently the President of the Research Committee on Disasters for the International Sociological Association. She is a Board Member for the William Averette Anderson Fund, which is dedicated to increasing the number of underrepresented professionals in hazards and disaster research. She is also and an appointed member of the National Academies Resilience Roundtable.

Dr. Peek earned a B.A. in Sociology from Ottawa University in 1997, a M.Ed. in Education and Human Resource Studies from Colorado State University in 1999, and a Ph.D. in Sociology from the University of Colorado-Boulder in 2005. She was a faculty member at Colorado State University from 2005-2016.

Session 4 (January 31): Lesson-Drawing from Natural Hazards and Disasters (confirmed). Dr. Tom Birkland will provide an introduction to the United States natural hazards and disaster policymaking process. Emphasis will be placed on the comparative evolution of earthquake and hurricane policy in the United States as a way to unpack this process.

Speaker: Tom Birkland is the William T. Kretzer Professor of Public Policy, School of Public and International Affairs, North Carolina State University. Prior to that time Dr. Birkland served for 12 years on the faculty in the Nelson A. Rockefeller College of Public Affairs and Policy at the State University of New York at Albany. Dr Birkland examines the agenda-setting power of disasters and accidents, called (after John Kingdon) focusing events. His more recent book, *Lessons of Disaster*, is a follow-up to *After Disaster*, and relates focusing events, learning, and policy change.

Session 5 (February 7): Firewise Communities: Exemplary Practices and Lessons for Fire-Prone Areas (confirmed).

Michele Steinberg will discuss wildfire hazards risk in the United States and the role of the Firewise Program in mitigating its impacts. Evidence of where Firewise practices reduced the impacts of wildland fires in fire-prone areas will be described. These actions will be compared to steps other communities could have taken to reduce the losses sustained during the 2017-2018 fires.

Speaker: Michele Steinberg is the Wildfire Division Manager of the National Fire Protection Association (NFPA), where she manages a team focused on wildland fire safety. The Wildfire Division emphasizes advocacy and outreach to reduce the loss of life and property to brush, grass, and forest fires. NFPA is a partner in the national Cohesive Strategy for Wildland Fire Management and a leading advocate for the promotion of Fire Adapted Communities. Our Firewise Communities/USA Recognition Program empowers residents to take action to reduce risks and has been adopted by communities in 41 states. The Firewise Communities program promotes both the adoption of sound codes, standards, and ordinances, as well as voluntary efforts to improve safety. New initiatives include a focus on youth education, a national Wildfire Community Preparedness Day, and international outreach to spread the concepts of community-based fire management.

Reading: As assigned by instructor or speaker

Session 6 (February 14): Class Discussion

Reading: As assigned by instructor or speaker

Session 7 (February 21): Disasters and Design: An Ecological Perspective (confirmed). Dr. Alex Felson will provide an overview of the concepts associated with disasters and design in pre- and post-disaster settings, including his work following Hurricane Sandy. Emphasis will be placed on the intersection between ecological processes and design, including how this thinking informs his work with communities.

Speaker: Alex Felson, Associate Professor Yale University – Dr. Felson is an ecologist and registered landscape architect. His scholarly research focuses on urban land systems, including green infrastructure, local and regional park design, community and landscape ecology, and climate change adaptation. Dr. Felson’s design work integrates basic and applied ecological research as a driver of the form, layout, and function of urban design, planning, and infrastructure projects. He integrates ecosystem services and public space into urban landscape-based projects across the country. Dr. Felson seeks new ways of constructing biologically rich systems through research-based design and adaptive management.

Reading: As assigned by instructor or speaker

Session 8 (February 28): Observations of Puerto Rico’s Recovery from Hurricane Maria: An Engineering Perspective (confirmed). University of Puerto Rico at Mayaguez Professors Ismael Pagan and Ricardo Lopez-Rodriguez will discuss their observations of the recovery effort currently underway in Puerto Rico. Emphasis will include an overview of impacts, the challenges of repairing major civil infrastructure, and the role the University is playing in this effort.

Speakers: Ismael Pagan and Ricardo Lopez-Rodriguez (confirmed) are Professors in the Department of Civil Engineering and Surveying at the University of Puerto Rico at Mayaguez and researchers in the Coastal Resilience Center of Excellence at the University of North Carolina at Chapel Hill. Dr. Pagan is also Department Chair of the Program, which graduates more Hispanic civil engineers than any program in the United States.

Session 9 (March 7): Art and Disaster: A Photographers Perspective on Hurricane Katrina Recovery in New Orleans, Louisiana (confirmed). Donn Young will discuss his personal experiences post-Katrina, including the loss of his life’s work as a photographer following Hurricane Katrina. He will also discuss his efforts as a photojournalist to capture the recovery process as requested by the State of Louisiana. This assemblage of work resulted in the show “40 Days and 40 Nights”, which served as part of the State of Louisiana Archives.

Speaker: Donn Young – Following Hurricane Katrina, floodwaters destroyed more than 1,350,000 images in Donn’s studio. Since moving from New Orleans to Chapel Hill, Donn has worked with a number of faculty and others, serving as a photojournalist taking images used to support a range of research- and advocacy-related projects.

SPRING BREAK – March 9th-19th

Session 10 (March 21): Class Discussion

Session 11 (March 28). Geological Hazards in Hawaii and Italy: A Cross Cultural Comparison (confirmed). Dr. Chris Gregg, a Professor of Geology at East Tennessee State University will discuss his volcano-related fieldwork and teaching experience in Hawaii and Italy. Emphasis will be placed on blending a geologic understanding of volcanic risk and the degree to which this information has been effectively conveyed to elected officials and residents in hazard-prone communities.

Speaker: Chris Gregg is a Professor in the Department of Geology at East Tennessee State University. His areas of interest and expertise include physical volcanology, volcano hazard assessment, geological risk assessment and risk management, and early warning systems. Dr. Gregg previously led curriculum development programs at the National Disaster Preparedness and Training Center at the University of Hawaii at Manoa. He is also an Adjunct Graduate Faculty in the Department of Public Health, East Tennessee State University; Co-developer of the Risk Management Module: Center for study of Geological and Climate Risk (CERG-C), the University of Geneva, Switzerland; Affiliate Graduate Faculty, Department of Geology &

Geophysics, University of Hawaii, Honolulu, Hawaii, USA; and Research Affiliate, Joint Centre for Disaster Research, Massey University, Wellington, New Zealand

Session 12. (April 4): Wildfire Vulnerability and Creating more Fire-Resilient Communities (confirmed). Dr. Nowell will discuss the past wildfire season and her work assessing community resilience to wildfires. Additional topics discussed will include the role of firefighters in response to wildland fires, to include organizational strategies employed.

Speaker: Branda Nowell is an Associate Professor at North Carolina State University specializing in inter-organizational relationships, social networks, and community capacity for multi-agent collaboration and coordination within complex problem domains. As an interdisciplinary scholar, she integrates community and organizational psychology with public management to better understand community-based networks of public and nonprofit agencies working in a common problem domain. She currently co-leads a research team (firechasers.ncsu.edu) focused on advancing the science of adaptive capacity toward more disaster resilient communities. Since 2008, this team has worked in collaboration with the US Forest Service on research aimed to improve inter-agency coordination and communication during large scale wildfire events.

Session 13 (April 11) Disaster Recovery in a Small Town: The Challenges Facing Rural Communities through the Eyes of a Town Manager (confirmed). Mr. Al Leonard will discuss the impacts of Hurricane Matthew on the Town of Fair Bluff, North Carolina and will describe the process of disaster recovery as it has unfolded from a local government perspective. Issues discussed will include the myriad recovery programs and how well they do or do not address the local conditions.

Speaker: Al Leonard is the Town Manager of Fair Bluff, located along the Lumber River in Columbus County, North Carolina. Fair Bluff was devastated by the flooding associated with Hurricane Matthew, which struck the state in the fall of 2016. Mr. Leonard is a graduate of the University of North Carolina at Chapel Hill.

Reading: As assigned by instructor or speaker

Special Guest Lecture (April 16th) 2017 Hurricane Season: Implications for Emergency Management in the 21st Century. (confirmed; Lecture is likely to occur at 4pm on campus; possible student meeting beforehand is being proposed). Brock Long, FEMA Administrator will discuss the 2017 hurricane season in the context of the evolving field of emergency management, including the importance of governance, addressing variations in state and local capacity, social vulnerability, and evolving technologies.

Speaker: William B. “Brock” Long was confirmed by the U.S. Senate and began his service as the Administrator of the Federal Emergency Management Agency (FEMA) in June 2017. Mr. Long has more than 16 years of experience assisting and supporting local, state, and Federal Governments with building robust emergency management and public health preparedness programs.

Prior to leading FEMA, Mr. Long worked as Executive Vice President at Hagerty Consulting, where he provided strategic direction and leadership to the firm’s full complement of emergency management programs and professionals. Mr. Long has served as Project Executive for more than 50 projects in all parts of the United States, ranging from complex attack scenario exercises to designing multi-jurisdictional, all-hazard evacuation plans for major Urban Area Security Initiative designated jurisdictions.

From 2008-2011, Mr. Long served as Director of Alabama’s Emergency Management Agency (AEMA) under Governor Bob Riley. As Director, he was designated the State Coordinating Officer for 14 disasters, including eight presidentially-declared events. Mr. Long also served as an on-scene State Incident Commander for the Alabama Unified Command during the Deepwater Horizon oil spill.

Prior to his position as Director at AEMA, Mr. Long was a FEMA Regional Hurricane Program Manager, FEMA Hurricane and Evacuation Liaison Team Leader, and statewide school safety coordinator for the Georgia Emergency Management Agency. His areas of expertise include strategic emergency operations planning, exercise, evacuation, school safety, recovery management, and response logistics.

Session 14 (April 18). Linking Natural Hazards Risk Management and Climate Change

Adaptation: An International Perspective (confirmed). Steve Dredge will discuss the linkage between natural hazards risk management and climate change adaptation, drawing on his practical experience applying land use planning and policy analysis tools in Australia.

Speaker: Stephen Dredge leads the firm MeridianUrban and is a Principal-level urban planner with Australian and international experience spanning a range of fields including land use planning, urban policy, disaster resilience, and adaptation. He has a Bachelor of Regional and Urban Planning, First Class Honours from the University of Queensland.

Stephen is an industry leader in strategic planning and policy development, delivering these services for both governance reviews and urban policy changes. Stephen utilizes innovative risk management processes to improve the operation of statutory planning instruments in a range of urban settlements and contexts.

He has also pioneered innovations in the integration of natural hazard risk management and climate adaptation into land use planning practice. Stephen has recently authored or significantly contributed to a range of National and state-level policy documents in these fields and has deployed this guidance into practice for multiple projects.

Session 15 (April 25). Class wrap up.

In our final class we will have an open discussion about the themes and ideas addressed throughout the semester, topics that could be added in a future speaker series class, and other items germane to the study of natural hazards and disasters.