

**URPL 969 - Applied GIS Workshop:  
Rethinking New Orleans After Hurricane Katrina**

Spring 2006 -- 3 credits

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Lecture – Wednesday, 1:00-2:15 pm – 208 Old Music  
Hall

Lab – Friday, 1:00-2:15 pm – URPL Computer Lab



On August 29th, Hurricane Katrina devastated New Orleans and the central Gulf Coast. The storm killed over one thousand people in Louisiana and flooded 80% of the structures in New Orleans. A mandatory evacuation was ordered while governments drained the city, repaired levees, and restored critical infrastructure. The long-term human impacts of the catastrophe will be harder to assess. Local officials fear that many of the nearly half-million city residents may not return. The planning profession has a critical role in rethinking and rebuilding the city and region. The creative thinking of planners working in collaboration with other disciplines from engineering to sociology is needed to shape the future of New Orleans. An opportunity exists to rebuild the city in a sustainable and more socially equitable manner. This workshop allows students to use GIS to offer ideas and recommendations on how to rebuild New Orleans. It provides opportunities to learn about the environmental setting and culture of New Orleans; review the literature on coastal hazards, disaster recovery, and sustainable development; conduct a GIS needs assessment; plan and design GIS applications, acquire and integrate spatial data; conduct sophisticated GIS analyses; and communicate ideas in a forum that will help decision-makers as they shape the future of one of America's greatest and beloved cities.

An introductory course in GIS or cartography is recommended.

Enrollment limit – 20 students

Textbooks:

- Wheeler, Stephen M. 2004. Planning for Sustainability: Creating Livable, Equitable, and Ecological Communities. Routledge Press.
- Colten, Craig E. 2005. An Unnatural Metropolis: Wresting New Orleans from Nature. LSU Press.
- Piazza, Tom. 2005. Why New Orleans Matters. ReganBooks.

Additional Reading:

- Lewis, Pierce F. 2003. New Orleans: The Making of an Urban Landscape. Univ. of Virginia Press.
- Burby, Raymond J. (Ed.). 1998. Cooperating With Nature: Confronting Natural Hazards With Land-Use Planning for Sustainable Communities. Joseph Henry Press.
- H. John Heinz III Center for Science, Economics, and the Environment. 2000. The Hidden Costs of Coastal Hazards: Implications for Risk Assessment and Mitigation. Island Press.
- Deyle, Robert E. et al. 1998. Planning for Post-Disaster Recovery and Reconstruction. American Planning Association. PAS Report 483/484.
- Vale, Lawrence J. and Thomas J. Campanella (Eds.). 2005. The Resilient City: How Modern Cities Recover from Disaster. Oxford University Press.
- Mileti, Dennis S. 1999. Disasters by Design. Joseph Henry Press.
- Cutter, Susan L. (Ed.). 2001. American Hazardscapes: the Regionalization of Hazards and Disasters. Joseph Henry Press.
- Greene, R.W. 2002. Confronting Catastrophe: A GIS Handbook. ESRI Press.
- Amdahl, Gary. 2001. Disaster Response: GIS for Public Safety. ESRI Press.
- Falconer, Allan and Joyce Foresman (Eds.). 2002. System for Survival: GIS and Sustainable Development. ESRI Press.

Grading/Assignments:

Paper – Review of Hurricane Katrina GIS Application – 10 pages – due 3/10 (30%)

Project – New Orleans GIS Application – due 4/28 (40%)

Project – New Orleans GIS Application – Presentation – week of 5/1 (20%)

Participation – (10%)

Office Hours: After class or by appointment

Class Web Site: <http://coastal.lic.wisc.edu/urpl969-katrina/>

Week 1

LECTURE – Wednesday, January 18th	Course Outline, Introductions
VIDEO – Friday, January 20 <sup>th</sup> [MEET IN ROOM 208]	Overview of Hurricane Katrina and Its Impacts on New Orleans

Week 2

DISCUSSION - Wednesday, January 25th	Do you know what it means to miss New Orleans? An exploration of the culture of New Orleans
GUEST LECTURE - Friday, January 27 <sup>th</sup> [MEET IN ROOM 208]	Using Collaboration Resources/Software on the UW-Madison Campus (Jeff Bohrer, Kathy Riley)

Week 3

GUEST LECTURE - Wednesday, February 1st	Coastal Hazards (Phil Keillor, Alan Lulloff)
LAB - Friday, February 3rd	Louisiana GIS Data Acquisition and Integration

Week 4

DISCUSSION - Wednesday, February 8th	Coastal Hazards
LAB - Friday, February 10th	Working with elevation data

Week 5

LAB - Wednesday, February 15th	Working with geodetic control data
GUEST LECTURE - Friday, February 17 <sup>th</sup> [MEET IN ROOM 208]	Disaster Response and Recovery (Chris Diller, Larry Reed)

Week 6

DISCUSSION - Wednesday, February 22nd	Disaster Response and Recovery
LAB - Friday, February 24th	Working with parcel data

Week 7

GUEST LECTURE - Wednesday, March 1st	Sustainable Development (James Schwab)
LAB - Friday, March 3rd	Working with transportation data

Week 8

DISCUSSION - Wednesday, March 8th	Sustainable Development
GUEST LECTURE - Friday, March 10 <sup>th</sup> [MEET IN ROOM 208]	Public Participation GIS (Michael Barndt) <b>Review of Hurricane Katrina Response/Recovery GIS Application Paper Due</b>

Week 9 – Week of March 13th

	SPRING BREAK
	SPRING BREAK

Week 10

WISCLINEWEB - Wednesday, March 22 <sup>nd</sup> <b>[MEET IN PYLE CENTER-ROOM 227]</b>	Greater New Orleans Community Data Center (Joy Bonaguro)
WISCLINEWEB - Friday, March 24 <sup>th</sup> <b>[MEET IN PYLE CENTER-ROOM 227]</b>	New Orleans GIS Analysis (Virginia Burkett, Paul Haughey, Isabelle Maret, Katherine Cargo, and others)

Week 11

LECTURE - Wednesday, March 29th	TBD
LAB - Friday, March 31st	Project work time

Week 12

LECTURE - Wednesday, April 5th	TBD
LAB - Friday, April 7th	Project work time

Week 13

LECTURE - Wednesday, April 12th	TBD
LAB - Friday, April 14th	Project work time

Week 14 – Week of April 17th

LECTURE - Wednesday, April 19th	TBD
LAB - Friday, April 21st	Project work time

Week 15

LECTURE - Wednesday, April 26th	TBD
LAB - Friday, April 28th	Project work time <b>New Orleans GIS Application Project Due</b>

Week 16

LECTURE - Wednesday, May 3rd	<b>Project Presentation</b>
LAB - Friday, May 5th	<b>Project Presentation</b>

Revised – February 9, 2006