

University of New Orleans

ScholarWorks@UNO

---

DRU Workshop 2011 Presentations - Disaster  
Resistant University Workshop: Building  
Partnerships in Mitigation

Conferences and Workshops

---

2-2011

## Teaching Hazard Mitigation Planning through Learning Service

Melanie Gall

*Louisiana State University*

Follow this and additional works at: <https://scholarworks.uno.edu/dru2011>

---

### Recommended Citation

Gall, Melanie, "Teaching Hazard Mitigation Planning through Learning Service" (2011). *DRU Workshop 2011 Presentations - Disaster Resistant University Workshop: Building Partnerships in Mitigation*. Paper 8. <https://scholarworks.uno.edu/dru2011/8>

This Presentation is brought to you for free and open access by the Conferences and Workshops at ScholarWorks@UNO. It has been accepted for inclusion in DRU Workshop 2011 Presentations - Disaster Resistant University Workshop: Building Partnerships in Mitigation by an authorized administrator of ScholarWorks@UNO. For more information, please contact [scholarworks@uno.edu](mailto:scholarworks@uno.edu).

# TEACHING HAZARD MITIGATION PLANNING THROUGH SERVICE-LEARNING

Melanie Gall

DRU Symposium, New Orleans

February 16, 2011

The logo for Louisiana State University, featuring the letters 'LSU' in a bold, dark blue, sans-serif font. The letters are closely spaced and have a slight shadow effect.

LOUISIANA STATE UNIVERSITY

# Where can you teach hazard mitigation?

## Disciplines:

- Civil Engineering, Construction Management, Chemical Engineering
- Continuing Education
- Environmental Sciences (e.g. Geography, Climatology)
- Environmental Resource Management
- Emergency Management
- Public Health
- Public Administration
- ...

**LSU**

LOUISIANA STATE UNIVERSITY



# How to incorporate hazard mitigation planning?

- Class setting
- Seminars
- Online
- Workshops
- Service-learning

## Classes:

- Environmental impact assessments
- Hazards analysis
- Risk management and assessments
- ...



# How to incorporate hazard mitigation planning? (cont.)

- Teach components
- Teach all elements



<http://www.fema.gov/library/viewRecord.do?id=2066>

## At LSU

- Service-learning
- Combination of class setting and online
- ENVS 4262 - Environmental Hazards Analysis  
Dept. of Environmental Sciences
- Pre-plan support and during plan development (S09, S10)

**LSU**

LOUISIANA STATE UNIVERSITY



# How to connect students with mitigation?


## Service-Learning:

hands-on class allows students to gain further understanding of course content by participating in a service activity that meets community needs and highlights civic responsibility (Bringle & Hatcher 1995)

- Reflection
- In-class discussion
- Requires community partner & flexibility





# Environmental Hazards Analysis (ENVS 4262)

- Community partner: LSU Public Safety
- Syllabus covered all elements of mitigation planning 
- Assignments supported pre-plan and plan data collection (capacity assessment)
- Training in areas outside of course material
- Lots of team work
- Interaction with non-students
  - Community partner, assignments, ...
- Guest presentations by Casey Levy



# Assignments - Pre-Plan

- #1 DRU Vulnerability questionnaire (individual) 
- #2 Identify the hazards (data collection, team work) 
- #3 Impact assessment (surveys, team work)
- #4 Identify mitigation actions (research, individual)
- #5 DRU Vulnerability questionnaire “plus” (individual)
- #6 Reflection paper
- Midterm and final exams

**LSU**

LOUISIANA STATE UNIVERSITY





# Assignments in support of plan

- **#1 Human subjects training (NIH certificate, individual)**
- **#2 Draft surveys (online, face-to-face, 5 teams)**
  - General, H1N1, admin/staff, labs, researchers
- **#3 IS-22 Citizen Preparedness certificate (individual)**
- **#4 Deliver completed surveys (20 per person)**
- **#5 Present survey findings**
- **#6 Reflection paper**
- **Midterm and final exams**



LOUISIANA STATE UNIVERSITY



# LSU System Multi-Hazard Mitigation Plan General Hazards On-Line Survey

Team Members:  
Kasey Pattan  
Quang Tran

April 22, 2010



[cschool.wordpress.com/](http://cschool.wordpress.com/)

# Survey Overview

- Objective:
- To identify natural and man made hazards that respondents deemed important for campus emergency preparedness
- To identify the percentage of respondents aware of and actively participating in LSU's Emergency Text Messaging System
- To identify effective ways to communicate with the LSU Community in the event of an emergency
- To identify if the respondents have a personal emergency preparedness plan
- Only survey that was conducted on-line



[www.titusville.com/](http://www.titusville.com/)

# Methodology

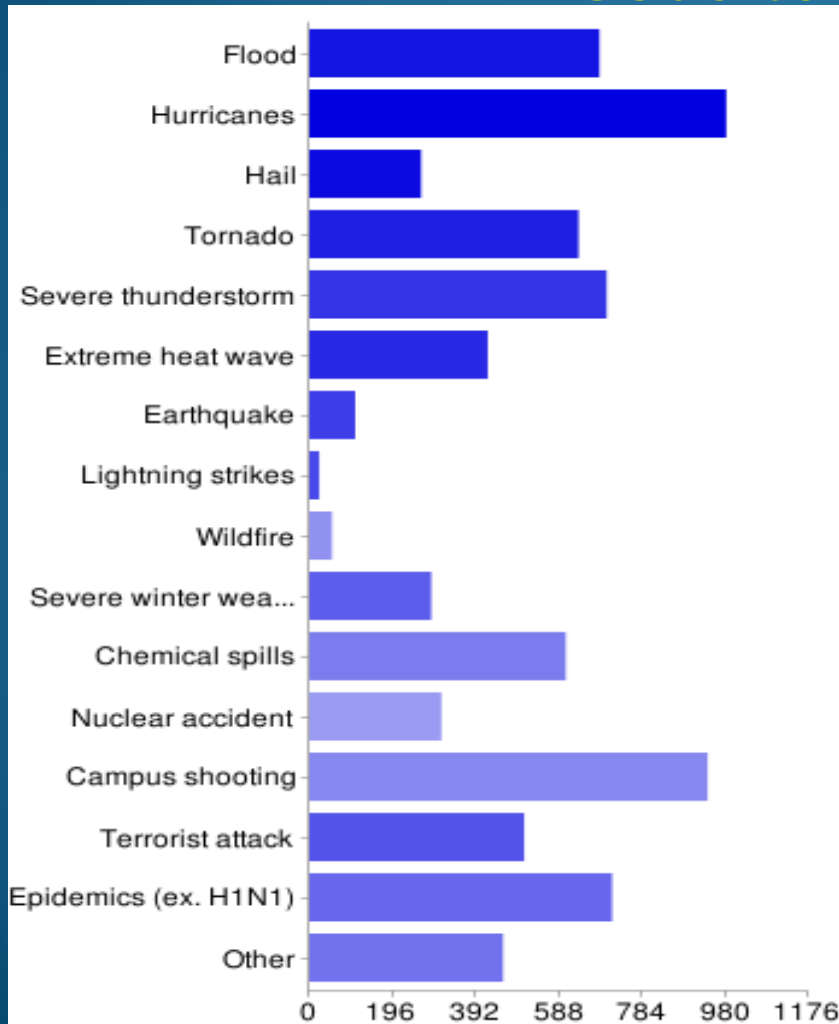
- LSU System Hazard Mitigation Online Survey
- March 15, 2010
- LSU Broadcast Center
- Emailed survey to entire LSU Community
- Storms, Guns, Germs, and More
- 1,036 Responses Collected
- No interviews were conducted in person



[cse.unt.edu](http://cse.unt.edu)

# Results

## Question 1: What hazards do you think the university needs to prepare for?



- Flood 66%
- Hurricanes 95%
- Hail 25%
- Tornado 61%
- Severe thunderstorm 68%
- Extreme heat wave 41%
- Earthquake 10%
- Lightning strikes 2%
- Wildfire 5%
- Severe winter weather 28%
- Chemical Spills 58%
- Nuclear accident 30%
- Campus shooting 91%
- Terrorist attack 49%
- Epidemics 69%
- Other 44%



# ENVS 4626

LSU Hazard Mitigation Plan - Lab Survey  
Overview



- Lab Survey Team: Carlos Giron, Stephen Wilson, Sarah Berry, Michael Schulz, and King Fung
- Survey Group: Professors (PI), Researchers, and Graduate Students that work within the +800 labs at LSU.

# Survey Development

A background image showing various pieces of laboratory glassware, including beakers, flasks, and a graduated cylinder, some containing colored liquids like blue, yellow, and green. The glassware is arranged on a white surface against a blurred background of more glassware and a blue wall.

- Team Brainstorming Sessions
- Group Reviews and Edits
- Final Survey: 5 Sections, 50 Questions (actually 70), Closed & Open-ended Questions, Multiple Follow-on Questions



A background image showing various pieces of laboratory glassware, including beakers, flasks, and a graduated cylinder, some containing colored liquids like blue, yellow, and green. The glassware is arranged on a white surface against a blurred background of more glassware and a blue wall.

# Types of Questions

- Where, Who (optional) & How Long?
- Training, CPR/AED, Emergency Facilities (type, location, testing), PPE (type, enforcement)
- Potential Hazards (type, detection, mitigation)
- Waste Handling, Chemical Inventory (methods, inspections), Housekeeping
- Previous Events (number, response, ratings, overall feeling of safety, areas for improvement)
- SOPs, MSDS, Animals, Backup Power, Data, Flooding, Gas, Infrastructure

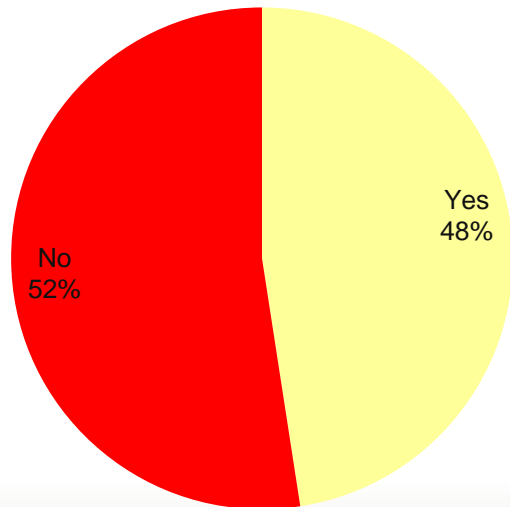
# Conducting Surveys

A background image showing various pieces of laboratory glassware, including beakers, flasks, and a graduated cylinder, some containing colored liquids (blue, yellow, green, orange). The glassware is arranged on a surface, and the background is slightly blurred.

- Team scheduled interviews
- Mostly self-performed (with standby), walked halls and found other victims
- Total Completed = 86

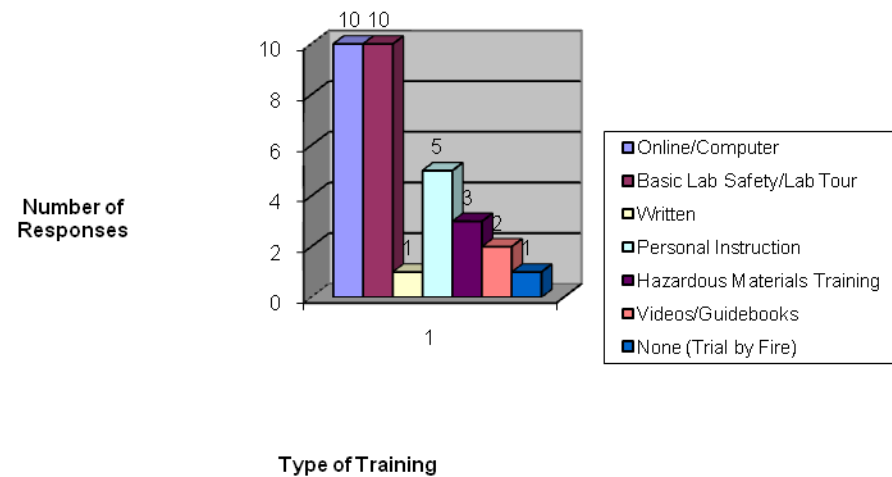
# Survey Results

**Q6 Were you required to complete a safety training course prior to working in the lab?**



**Q6.1 If yes, please describe.**

**Safety Training Description (n=53)**



# How we used the data...

- **Pre-plan data helped write the application proposal**
  - Successful award communicated with students
- **Surveys converted into online versions for wider distribution across four campuses**
- **Very positive response by students**
  - 50-50 online content helped scheduling and accommodated part-time students
  - Research assistants recruited from class to work on plan
  - Students found employment in hazard mitigation

**LSU**

LOUISIANA STATE UNIVERSITY



# Discussion

- Lots of pre-planning and instructions required
- Finding the right community partner
- Balancing work of undergrad and grad students
- Flexibility to adjust time and syllabus
  - IRB exemption of surveys
  - Broadcasting/university clearance
  - Meetings and interaction with community partner
- Teaches additional skills (e.g. team work, research, analysis)
- Get teams to organize themselves and meet up/check up
  - Team work can create problems
  - peer evaluations



**Thank you for your attention!**

**Any questions?**

**Melanie Gall**  
**Assistant Professor - Research**  
**Department of Geography & Anthropology**  
**Louisiana State University**  
**[gallm@lsu.edu](mailto:gallm@lsu.edu)**

