ENVIRONMENTAL HAZARDS ANALYSIS

ENVIRONMENTAL SCIENCES ENVS 4262, SPRING 2010

TUESDAY AND THURSDAY, 3:10 – 4:30PM, 102 TUREAUD HALL

INSTRUCTOR: **Dr. Melanie Gall**
E220A Howe-Russell Geoscience Complex
Phone: 225-578-6119
gallm@lsu.edu

OFFICE HOURS: Prior to every on-campus meeting from 1:30 – 3pm or by appointment

I. COURSE DESCRIPTION

This service-learning class brings together graduate and undergraduate students from a variety of disciplines to develop an understanding of the variety and complexity of environmental issues impacting our communities. The class examines how the structure of human settlement (physical, cultural, social, economic) are impacted by environmental hazards. To understand these hazards and their impacts, students will learn the basic steps of hazard mitigation planning, which consists of hazard identification, vulnerability assessment, and the development of impact scenarios and mitigation strategies for the natural, built, and human environment.

Students are expected

(1) to apply the theoretical knowledge learned in this course and to address hazard mitigation problems of a community through course assignments;

(2) to actively participate in developing and conducting risk awareness surveys on campus; and

(3) to successfully complete IS393.A .

COURSE FORMAT

This course combines traditional on-campus instruction with web-based learning. There will be 17 on-campus meetings and 12 online sessions. Web-based sessions are of instructional character and will involve reading required material, viewing and studying a power point presentation as well as other class-related materials (e.g.. short videos, animations, etc). On-campus meetings are instructional as well but are anticipated to be mostly designed around the service-learning assignments and experience. **The class web site on Moodle is an important tool where assignments, course documents, instructions, readings, etc. will be posted. Make sure to familiarize yourself with Moodle.**

SERVICE-LEARNING PARTNER

The community focus of this class is the LSU campus in Baton Rouge. In collaboration with the LSU Public Safety department and Rusti Liner, the program manager for the LSU System Multi-Hazard Mitigation Plan, students are directly involved in the process of hazard mitigation planning. Students contribute to the planning process by conducting surveys as directed by the community partners.

Class assignments will not only be geared towards developing and conducting surveys in support of the hazard mitigation plan but will also include human subjects training, a FEMA

Independent Study Course (IS-22) and an exercise where students will reflect upon their service-learning experience.

In sum, this hands-on service-learning class will allow students to gain further understanding of the course content by participating in a service activity that meets community needs. Furthermore, the class is intended to highlight civic responsibility (Bringle & Hatcher 1995).

Points of Contact:

Sgt. Joe Thompson
University Public Safety
South Stadium Road
Baton Rouge, LA 70803

Rusti Liner
Dept. of Geography & Anthropology
E220 Howe-Russell Geoscience Complex
Baton Rouge, LA 70803

COURSE REQUIREMENTS

A two-tiered evaluation system will be used to produce the final grades for the course. This will be based on the following:

(1) Undergraduate Students: Three assignments (10 % each of which 50% are participation where applicable), reflection report, IS-22 certificate, 10 reading quizzes (each worth 1%), midterm and final exam;

(2) Graduate Students: Three assignments (10 % each of which 50% are participation where applicable), graduate assignment, reflection report, class presentation, 10 reading quizzes (each worth 0.5%), IS-22 certificate, midterm and final exam.

Course Requirements & Grade Weights		
	Undergraduate	Graduate
3 Assignments (total)	30 %	30 %
Graduate Assignment	N/A	15 %
IS-22 certificate	10 %	5 %
Midterm Exam	20 %	15 %
Final Exam	20 %	15 %
Service-Learning Reflection	10 %	10 %
10 Reading Quizzes (total)	10 %	5 %
Class presentation	N/A	5 %

ASSIGNMENTS

Students are required to develop and implement one or more surveys for the community partner during the course of three assignments. **Two of these assignments will require team work. To ensure fair and evenly distributed workloads within teams, students will evaluate each other. This evaluation will factor into the assignment grade.** If there are problems within a team, notify the professor as soon as the problem arises.

Grading Policy	
A	90 – 100 %
B	80 – 89 %
C	70 -79 %
D	60 -69 %
F	< 60 %

Graduate students are additionally asked to code, analyze, and describe the collected survey data in a research paper. In the last week of class, graduate students will present a summary of their findings along with an overview of the service-learning activities performed during this course to the class and the community partners for discussion. **Graduate students are expected to demonstrate a broader understanding of the context of their field and research work and are held to a higher standard of performance expectation on all of their assignments.**

Deadlines for the assignments are **strictly enforced**. There will be no incompletes given in this class, so be sure to plan and use your time wisely. **Make sure to complete IS-22 at least two days before the deadline to ensure receipt of your certificate.**

Assignments will be handed in during on-campus meetings. Assignments due during a web-based session will be emailed to the instructor (gallm@lsu.edu) and is due no later than 4pm CST. There is neither an extra credit nor a late assignment policy. Any assignment not handed in by this time will receive a grade of zero points. Be sure to complete your assignments using Microsoft Word (.doc or .docx) and/or Microsoft Excel (.xls or .xlsx) where necessary. Conversion into pdf format is strongly encouraged but not required. If you do not have Microsoft Word, you may use any other word processing software and convert your assignment to a Rich Text (.rtf) or pdf (preferably) document for submission.

REFLECTION

Reflection is an important part of the service-learning experience. It is the "intentional consideration of an experience in lights of particular learning objectives" (Bringle and Hatcher, 1999). In this class, reflection will take place in three different ways:

a) In-class discussion sessions: These sessions will take place after each assignment and will allow students an opportunity to share experiences with other students and learn from one another.
b) Reflection paper: Towards the end of the semester, students will answer and reflect on a list of short questions. These questions focus on the service-learning experience and how it connects with the content of the course.
c) Summary presentation of assignments: Graduate students will present a summary of their class assignments and work to the community partner at the end of the semester.

READINGS

It is expected that students complete all required readings prior to class and that all students actively participate in the discussions. The readings for web-based class sessions will be accompanied by **quizzes**. These quizzes can be answered online using Moodle.

SITE VISIT

Each student will participate in a site visit at the University Public Safety Department. This is an important part of understanding the needs of the community partner. **Absence** at the day of the site visit **will reduce your grade by an entire letter grade**.

CLASS POLICIES

- Please respect your classmates and instructor by being on-time and prepared for class.
- No food allowed in the class room.
- No cell phones or other electronic devices such as laptops allowed in the class room.
- If a student misses a class, it is his/her responsibility for obtaining the information that was discussed in class.
- Feel free to stop by my office at any time (open door policy) or email me if you have questions about assignments, etc.

- It is your responsibility to check *Moodle* regularly to keep up with changes to course assignments, class materials, etc.

II. TECHNOLOGY REQUIREMENTS, COMMUNICATION & SUPPORT

This course will require you to use instructional technology as a tool for learning and research, as well as an object of study. Course materials, resources, assignments, and class discussion forums will all be accessed on the course website (using Moodle). The class web site on Moodle is an important tool where assignments, course material, instructions, and readings will be posted. Make sure to familiarize yourself with Moodle! Email and Q&A forums will be used to communicate with each other and the instructor. You will also need to access multimedia files that contain audio/video content. Therefore, you must have direct access to all of the following resources:

- Computer with sound card and speakers (or headphones)
- Internet connection
- Email account
- Microsoft Word and Excel (97 or higher)
- Internet Explorer browser (NOTE: Some media or website features may not function properly with other browsers. Free download at http://www.microsoft.com/downloads/browse.aspx?displaylang=en&productID=5A8BB164-5FC3-4BE5-95BB-BA73EEED1CA6)
- Adobe Acrobat Reader (free download at http://www.adobe.com/products/acrobat/readstep2.html)
- RealPlayer (free download at http://www.real.com)
- QuickTime Player (free download at http://www.apple.com/quicktime/download/win.html)
- Mediasite Viewer (NOTE: Whenever viewing a video lecture, a dialog box will prompt you to download Mediasite Viewer if it is not yet installed on your machine).

Information about the Moodle learning management system is available at http://grok.lsu.edu/Article.aspx?articleid=6408.

EMAIL POLICY & COMMUNICATION

The instructor will respond to any student emails and Q&A posts on Moodle within 2 work days of RECEIVING or POSTING the message. Please post your questions in the Q&A forums to make the question and answer accessible to other students. Contact the instructor only via email whenever postings on Moodle are not adequate. When contacting the instructor begin the subject line of all course-related email with "ENVS 4262," followed by the subject of the message.

STUDENT TECHNOLOGY COMPETENCIES

This course will be conducted partially online. Administrative and technical support for the class web site will be provided. The facilitator will not provide individual assistance with issues related to your personal computer or software. You must have a basic level of computer/Internet competency in order to function independently in the course. You should be able to:

- Send and receive email
- Attach and download documents
- Use browser software to access web sites
- Download materials

- Use basic features of word processing software (copy, cut, paste, save files)

ACCOMMODATIONS FOR DISABILITIES

If you have a disability that may have some impact on your work in this class and for which you may require accommodations, please contact a Coordinator in the Office for Disability Services (112 Johnston Hall, 225.578.5919).

TECHNICAL SUPPORT

Contact the Office of Information Technology Services' Help Desk by telephone at 225-578-3375 or online at http://www.lsu.edu/its/helpdesk to obtain technical support.

The course schedule, required readings and procedures described in the syllabus are subject to change in the event of extenuating circumstances. Students will be informed of any such changes via the Moodle course site and/or via email.

III. A NOTE REGARDING ACADEMIC RESPONSIBILITY

Misrepresentation of your own work either through plagiarism, collusion, or data distortion is a serious breach of the LSU *Code of Student Conduct* where it says that

> *"Plagiarism" is defined as the unacknowledged inclusion of someone else's words, structure, ideas, or data. When a student submits work as his/her own that includes the words, structure, ideas, or data of others, the source of this information must be acknowledged through complete, accurate, and specific references, and, if verbatim statements are included, through quotation marks as well. Failure to identify any source (including interviews, surveys, etc.), published in any medium (including on the internet) or unpublished, from which words, structure, ideas, or data have been taken, constitutes plagiarism.*

(LSU *Code of Student Conduct*, http://appl003.lsu.edu/slas/dos.nsf/$Content/Code+of+Conduct?OpenDocument#5.1)

Again, sources are considered materials that are published in hard copy form such as books and journals (or someone else's term paper) as well as material downloaded from the Internet, without appropriate attribution and referencing of the copied passages. Plagiarism infringes on copyright protections and is considered theft of intellectual property. In addition to being illegal, plagiarism is morally wrong. If you have any questions on what constitutes plagiarism, get a copy of the LSU *Code of Student Conduct.* For guidelines on how to cite sources of information see the LSU library instructions (http://www.lib.lsu.edu/instruction/plagiarism2.html).

Collusion occurs when someone else writes (or dictates) portions of the assignment for you and you represent this as your own work. Data distortion is the intentional misrepresentation of data either through falsification, fabrication, or omission. If it is discovered that you have committed plagiarism, collusion, or data distortion on any assignment in this class, you will fail the course and you may face additional disciplinary action by the department, college, or Graduate School.

IV. REQUIRED TEXT AND READINGS

There are several required readings: (R1) is available at the LSU Bookstore. All others are either available for download from the Internet or are available on Moodle.

(R1) Schwab, Anna K., K. Eschelbach, D. J. Brower. 2007. *Hazard mitigation and preparedness*. John Wiley & Sons, Inc. 568 pp. ISBN-13: 978-0-471-79019-8, ISBN-10: 0-471-79019-2 (paperback).

(R2) Kelley, Kate, Belinda Clark, Vivienne Brown, and John Sitzia. 2003. Good practice in the conduct and reporting of survey Research. International Journal for Quality in Health Care 15(3): 261-266.

(R3) Diem, Keith G. 2004. A Step-by-step Guide to Developing Effective Questionnaires and Survey Procedures for Program Evaluation and Research. http://www.austincc.edu/npo/library/documents/stepbystep%20guide%20to%20developing%20effective%20questionnaires.pdf

(R4) FEMA. 2003. Building a disaster-resistant University. FEMA 443, August 2008. Federal Emergency Management Agency, Washington D.C., 68pp. Available from http://www.fema.gov/library/viewRecord.do?id=1565.

(R5) AMEC. 2006. Multi-Hazard Mitigation Disaster Resistant University Plan. July 6, University of Colorado – Boulder, 306pp. Available from http://www.dola.state.co.us/dem/mitigation/university_boulder_plan.pdf.

(R6) Pine, John C. 2009. Natural Hazards Analysis. CRC Press, Boca Raton, FL: 135-158.

(R7) Hodgson, Michael. E, and S. L. Cutter. 2001. Mapping and the spatial analysis of the hazardscapes. In American Hazardscapes by S. L. Cutter (ed.). John Henry Press, Washington D.C.: 37-60.

(R8) Yassi, Annalee, Tord Kjellstroem, Theo de Kok, and Tee L. Guidotti. 2001. Basic Environmental Health. Oxford, New York: 105-142.

(R9) Hill, Arleen A. and S. L. Cuttter. 2001. Methods for determining disaster proneness. In American Hazardscapes by S. L. Cutter (ed.). John Henry Press, Washington D.C.: 13-36.

(R10) Thomas, Deborah S. K. 2001. Data, data everywhere, but can we really use them? In American Hazardscapes by S. L. Cutter (ed.). John Henry Press, Washington D.C.: 61-76.

(R11) Fischoff, Baruch. 1995. Risk perception and communication unplugged: twenty years of process. Risk Analysis 12(2): 137-145.

V. LECTURE & READING OUTLINE

Date	*Day*	*Topic*	*Reading*	*Due*
Jan. 19	T	Introduction		
Jan. 21	Th	Hazard Mitigation Planning	R1-Ch. 1	
Jan. 26	T	Surveys, Interviews & Coding	R2; R3	
Jan. 28	Th	**Meet the Partners**	R1-Ch. 13; R4; R5	**Assignment #1: Human Subjects Training**
Feb. 2	T	Meteorological & Hydrological Hazards	R1-Ch. 2	
Feb. 4	Th	Geological Hazards	R1-Ch. 3	
Feb. 9	T	Man-Made Hazards	R1-Ch. 4	
Feb. 11	Th	Risk/Vulnerability Assessments & Environmental Justice	R1-Ch.10; S2	**Assignment #2: Develop Survey**
Feb. 18	Th	Socioeconomic vulnerability	R6	
Feb. 23	T	**Meet the Partners (Finalize Surveys)**		
Feb. 25	Th	Hazard Mapping using Geospatial Technologies	R7	
Mar. 2	T	**Midterm Exam**		
Mar. 4	Th	Impacts of Hazards on Society		
Mar. 9	T	Risk Assessment & Management in Public Health	R8	
Mar. 11	Th	Hazard Modeling & Data Sources	R9	
Mar. 16	T	Hazard Modeling & Data Sources	R10	**IS-22**
Mar. 18	Th	**Meet the Partners (Report on Surveying Process, EOC Visit)**		
Mar. 23	T	Measuring Losses and Impacts	R1-Ch.14	
Mar. 25	Th	Risk Communication & Community Involvement	R11	
Mar. 30	T	"Smart" Choices and Unintended Consequences	R1-Ch.5, Ch.6	**Assignment #3: Deliver Surveys**
Apr. 1	Th	Local Mitigation Actions	R1-Ch.8, Ch. 12	
Apr. 13	T	Hazard Mitigation in Louisiana	R1-Ch.7	
Apr. 15	Th	Resilient Communities & Private Sector	R1-Ch.9	**Grad Assignment: Survey Analysis**
Apr. 20	T	Hazard Mitigation & Private Sector		
Apr. 22	Th	Class Presentations		
Apr. 27	T	Class Presentations		**Assignment: Service-Learning Reflection**
Apr. 29	Th	What the future holds…		
May 4	T	TBD		
May 12	**F**	**Final Exam 3-5pm**		

Denotes on-campus meetings i.e. physical presence in 102 Tureaud is mandatory!