

NATURAL DISASTERS  
Spring 2010  
GL165, M, W, F, 2:00 – 2:50 PM  
Instructor: Professor Jose F. Longoria

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**Required Text:** Disasters: An Analysis of Natural and Human-Induced Hazards by Charles H.V. Ebert. (4th edition).

**Course Description**

**Natural Disasters** deals with the analysis of violent catastrophic phenomena that constantly occur in different parts of our planet Earth special attention is given to understand how they affect human activities. It is designed to give you an overview of the fundamental Earth Science processes triggering natural disasters. Internal and external processes involved in producing these natural phenomena will be considered.

The main objective of this course is to introduce students to the understanding of Natural Disasters as violent destructive phenomena trigger by the interaction of long-term geological processes and to evaluate the resulting hazards and risks to human life.

Special emphasis will be given to geologic hazards (natural phenomena or processes potentially becoming a disaster) and risks (magnitude and vulnerability to

potential death, injury, or loss of property due to a given geohazard). Current environmental issues such as threat to the world's human population and biodiversity and the cyclic reoccurrence of some of these disasters will be discussed.

The course requires involvement, independent thinking, and a lot of time. This is a class in which you have to work hard in; but, it is also one you should enjoy and derive motivation from. Consequently this course requires time so if you are busy, or overloaded with courses, or have a busy personal schedule, or plan to travel during the semester, or if you feel you will learn better in different learning modality you may not be suited to a course like this, if you have to make a change do it now.

**Course Policies**

**The course is based mainly on the lectures.** The topics of the lectures are also covered in the textbook, although lectures include material not covered in the textbook, and the textbook includes material not covered in the lectures. If you rely on the textbook without attending lectures, you will not receive all of the information that is covered on the exams. Also material cover in audio-visuals (DVDs, videos tapes, and websites) will be considered for the exams. It is extremely rare that a student who does not regularly attend the lectures will learn enough to get a final grade of beyond C. This includes students who make arrangements for others to take notes for them, because other people's notes are not usually as useful as your own.

*You are expected to maintain high standards of academic honesty.* Any student found in violation of these standards will earn an automatic F and be reported to the Dean's Office, no exceptions made. In accordance with FIU's policy on academic honesty, as set forth in Section 2.44 of the Academic Affairs Policies and Procedures Manual (<http://academic.fiu.edu/polman/sec2web.htm#two-forty-four>), it is expected that students in this class will neither submit the academic work of another as their own, nor provide work they have done for another student to be submitted as that other student's work.

**Students are required to attend all the lectures and to stay for the entire lecture period.** Discipline during the lecture will be strictly enforced: No disruption of lecture will be tolerated.

### Exams and Grading

**Exams will take place as scheduled** (see weekly schedule below) unless university classes are cancelled. The format of the regular and final exams is multiple choice. The regular exams and the final exam count 100 points each. They are to be finished in 40 minutes and cover all lectures and the corresponding material in the textbook and documentaries (DVDs and video tapes) covered since the previous exam. The final exam covers all lectures and corresponding textbook material not covered in the previous exams. The three exams have equal weight; that is, 33 per cent each.

**Makeup Exams.** In most cases, if you miss an exam you earn a 0. Makeup exams will be given only in extreme circumstances and if you have valid, documentable proof justifying your absence, such as a doctor's note explaining a bad illness, police report verifying a car accident or a death certificate of an immediate family member. University sponsored events away from campus, family trips out of town and a car that wouldn't start do not qualify for makeup exams. In the case of a valid reason that can be documented for missing an exam, you will be given a makeup exam at the end of the semester at the scheduled and no other date or time, you must review the course schedule to be aware of this date, which will be two week before the final exam. In such a case, you must contact the professor as soon as possible after missing the exam. The format of makeup exams is essay and short answer.

Note about exam times: In keeping with university policy, accommodations for students who wish to observe their religious holidays will try to be made. Students should make these requests known at the beginning of the semester. If you are scheduled to be

away for any reason during a scheduled exam, you should not take this course. If you have a time conflict with the final exam (see <http://www.fiu.edu/orgs/register/final.htm> for possible conflicts) do not take this course. It is your sole responsibility to function well in this class, do not expect any special consideration if you are overloaded with courses or overcommitted with personal activities.

**Extra Credit.** During the semester there will be opportunities during class to earn extra credit by answering questions based on the last several lectures. This is the **ONLY** form of extra credit.

**Grading.** Final grade in GLY1101 results from the average of the three exams.

**My grading policy is as follows:**

96-100	A
90-95	A-
86-89	B+
83-85	B
80-82	B-
76-79	C+
73-75	C
70-72	C-
66-69	D+
63-65	D
60-62	D-
<60	F

**The course content** is divided into three independent sections each. **Each part has an exam.**

**Weeks 1 – 5:**

**Section 1: Disasters Involving the Lithosphere (lecture notes + chapters 1, 2, 3). EXAM 1: Friday Feb 5**

**Weeks 6 – 10:**

**Section 2: Chapters 8, 9, 10, 11, 12, 13, 14. EXAM 2: Friday Mar 12**

**Weeks 11 - 15**

**Section 3: Chapters 15, 16, 17, 18. Exam 3: Finals Week**

**WEEKLY CALENDAR**

Week 1: Jan 3, 6, 8  
Introduction, Course Setup, Organization and expectations,

Week 2: Jan 11, 13, 15  
Foundations (lecture notes)  
Introduction to Disaster Management (Lecture notes + Preface + Introduction)

Week 3: Jan 18 (no class), 20, 22  
Disasters Involving the Lithosphere (lecture notes + chapters 1, 2, 3)  
2.1. Earthquakes

Week 4: Jan 25, 27, 29  
2.2 Volcanoes

Week 5: Feb 1, 3, 5  
2.3. Landslides

**Review for Exam 1, 9/23**  
**EXAM 1: Friday, 9/25**

Week 6: Feb 8, 10, 12  
Disasters Involving the Hydrosphere (lecture notes + chapters 4, 5)  
3.1 Tsunami  
3.2 Floods

Week 7: Feb 15, 17, 19  
Disasters Involving the Atmosphere (Lecture notes + chapters 6, 7, 8, 9)  
4.1 Hurricanes  
4.2 Tornados  
4.3 Lightning

Week 8: Feb 22, 24, 26  
Disasters Involving the Atmosphere (Lecture notes +chapters 6, 7, 8, 9)  
4.1 Hurricanes, 4.2 Tornados, 4.3 Lightning

Week 9: Mar 1, 3, 5  
Disasters Involving the Atmosphere (Lecture notes +chapters 6, 7, 8, 9)  
4.1 Hurricanes, 4.2 Tornados, 4.3 Lightning

**Review for Exam 2, Wed Mar 10**  
**EXAM 2: Friday Mar 12**

Week 10: 10/25, 10/28, 10/30  
Disasters Involving the Biosphere (Lecture notes +chapters 10, 11, 12)  
5.1 Drought/Desertification: Lecture notes  
5.2 Forest Fires: Lecture notes  
5.3 Threats to the Biosphere: Lecture notes

**Week 11: Mar 15, 17, 19: SPRING BREAK**

**Week 12: Mar 22, 24, 26 NO CLASSES, Professor at Professional Meeting**

Week 13: Mar 29, 31, Apr 2  
Disasters Involving the Biosphere (Lecture notes +chapters 10, 11, 12)  
5.1 Drought/Desertification: Lecture notes  
5.2 Forest Fires: Lecture notes  
5.3 Threats to the Biosphere: Lecture notes

**MAKEUP EXAMS: Apr 2 in PC321 at 3:00 PM**

Week 14: Apr 5, 7, 9  
Human-induced Disasters (Lecture notes +chapters 13, 14, 15)  
6.1 Environmental Concerns  
6.2 Social Aspects

Week 15: Apr 12, 14, 16  
Disasters Involving Extraterrestrial Bolides (lecture notes)  
7.1 Asteroids and Meteors (Lecture notes)  
7.2 Future of Humanity (lecture notes)

**Review for exam 3, Apr 16**

**EXAM 3: Check the academic calendar for official date and time**

Week 16: Apr 19-23, Finals Week.  
**EXAM 3 Check the academic calendar**

## GLY3034: Natural Disasters; Spring 10

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Week 1: Jan 3, 6, 8  
Introduction, Course Setup, Organization and expectations,

Week 2: Jan 11, 13, 15

Week 3: Jan 18 (no class), 20, 22

Week 4: Jan 25, 27, 29

Week 5: Feb 1, 3, 5

**Review for Exam 1, Feb 3**  
**EXAM 1: Friday Feb 5**

Week 6: Feb 8, 10, 12

Week 7: Feb 15, 17, 19

Week 8: Feb 22, 24, 26

Week 9: Mar 1, 3, 5

Week 10: Mar 8, 10, 12

**Review for Exam 2, Wed Mar 10**  
**EXAM 2: Friday Mar 12**

Week 11: Mar 15, 17, 19: SPRING BREAK

Week 12: Mar 22, 24, 26 NO CLASSES, Professor at Professional Meeting

Week 13: Mar 29, 31, Apr 2

**MAKEUP EXAMS: Apr 2 in PC321 at 3:00 PM**

Week 14: Apr 5, 7, 9

Week 15: Apr 12, 14, 16

**Review for exam 3, Apr 16**

Week 16: Apr 19-23, Finals Week.

**EXAM 3 Check the academic calendar**