

## **GEOG/GEOL 106 A Introduction to Natural Disasters and Hazards** (5 credits Natural Science)

Mr. Roselle, Office: B100D  
e-mail: droselle@bellevuecollege.edu  
Classroom: D273 9:30-10:20 Daily

Winter Quarter, 2010  
Phone: 425-564-2290  
Office Hr. 12:00-1:00

### **Course Description and Objectives:**

Geography 106 is a survey course. It is designed to introduce students to Earth and atmospheric potential hazards as reflected or evidenced by actual catastrophes or disasters. The course will strive to elevate student awareness regarding dangerous interactions between earth processes and humans, as well as the interrelationships among potential disasters. In doing so, students may be able to make more informed/educated decisions such as determining the best site location for a future home purchase. Throughout the course **'Case in Point'** examples are used to illustrate the various types of hazards, and record significant disasters. Also, they are useful to help understand the complexities of environmental policies, societal behaviors, and governmental responsibilities regarding hazards. A variety of relevant DVD's along with digital images, and slides will be used to enhance the delivery of information.

### **Text:**

**Natural Hazards and Disasters: 2009, 2nd Ed.** Hyndman and Hyndman, Brooks/Cole Publ.

### **Course requirements and policies:**

A minimum of **60%** is required to pass. **Six** exams and a **Final** are scheduled. The best **five** scores on the six exams will count. The Final cannot be dropped. The Final is not comprehensive. The Final is scheduled for **Monday, March 22 at 9:30** in D273. **Finals are not given early. No exceptions!**

Five best Exams @ 15% ea. =	75%
Final @ 25% =	<u>25%</u>
	100%

The lowest **Exam** score will be dropped.

**NO EXAM MAKE UPS.** Extra credit may or may not be found in the six (6) exams and Final. Pop quizzes are a possibility.

Last day to withdraw: **5:00 PM, February 26 (in person) or Noon, February 28 (Online).** A **"W"** will be posted on transcript. Failure to withdraw by the above deadlines will result in an **"F"** posted on transcript.

### **General Education Requirements**

**The Nature of Science: Rating ⇨ 3      Science and the Natural World: Rating ⇨ 3**

This course transfers as natural science credit. The class can be taken as Geography or Geology (one or the other but not both) credit to satisfy the College's distribution requirement in Sciences.

### **GRADING**

<b><u>LETTER GRADE</u></b>	<b><u>GPA</u></b>	<b><u>PERCENTILE</u></b>
A	4.0	93-100
A-	3.7	90-92
B+	3.3	87-89
B	3.0	83-86
B-	2.7	80-82
C+	2.3	77-79
C	2.0	73-76
C-	1.7	70-72
D+	1.3	67-69
D	1.0	60-66
F	0.0	<60

### **COURSE OUTLINE**

**Section I.      Introduction to Natural Hazards and Disasters**

Course overview. Terminology. Living with natural hazard risks. Predicting catastrophe. Role of public education.

Read: **Chapter 1:**    Natural Hazards and Disasters:

**Plate Tectonics and Physical Hazards**

Introduction to the Scientific Method. Plate tectonic theory. Plate boundaries and interactions. hot spot tectonics. Cascadian Subduction Zone.

Read: **Chapter 2:**    Plate Tectonics and Physical Hazards

### **EXAM ONE**

**Section II. Earthquakes and Their Causes**

How earthquakes work. Causes of earthquakes. Scaling earthquakes. Buildings and ground motion. Liquefaction and slope failure. Earthquakes and tectonic environments.

Read: **Chapter 3:** Earthquakes and Their Damages

**E X A M T W O**

**Section III. Earthquake Prediction and Mitigation; Tsunami**

Predicting and surviving earthquakes. Tsunami generation, prediction and mitigation.

Read : **Chapter 4:** Earthquake Prediction and Tectonic Environments  
**Chapter 5:** Tsunami

**E X A M T H R E E**

**Section IV. Volcanoes, and Volcanic Processes and Risks**

Volcanic materials. Magma composition and eruptions. Types of volcanoes and associated eruptions. Volcanic hazards and mitigation

Read: **Chapter 6:** Volcanoes: Tectonic Environments and Eruptions  
**Chapter 7:** Volcanoes: Hazards and Mitigation

**E X A M F O U R**

**Section V. Mass-Wasting/Slope Failure**

Slope processes, and materials. Causes and types of slope failure. Hazards and mitigation.

Read: **Chapter 8:** Landslides and Other Downslope Movement

**E X A M F I V E**

**Section VI. Streams and Flooding**

Basics of stream dynamics. Stream types. The hydrograph. Floods. Development of floodplains. Human impact on stream dynamics.

Read: **Chapter 11:** Streams and Flood Processes  
**Chapter 12:** Floods and Human Interactions

**E X A M S I X**

**Section VII. Catastrophic Weather**

Hurricanes, typhoons, and cyclones. Nor'easters. Thunderstorms and tornadoes.

Read: **Chapter 14:** Hurricanes and Nor'easters

**Chapter 15:** Thunderstorms and Tornadoes

**F I N A L**



## PROCEDURES AND GUIDELINES OF THE SOCIAL SCIENCE DIVISION Winter 2010

### Cheating, Stealing and Plagiarizing\*

Cheating, stealing and plagiarizing (using the ideas or words of another as one's own without crediting the source) and inappropriate/disruptive classroom behavior are violations of the Student Code of Conduct at Bellevue College. Examples of unacceptable behavior include, but are not limited to: talking out of turn, arriving late or leaving early without a valid reason, allowing cell phones/pagers to ring, and inappropriate behavior toward the instructor or classmates. The instructor can refer any violation of the Student Code of Conduct to the Dean of Student Services for possible probation or suspension from Bellevue College. Specific student rights, responsibilities and appeal procedures are listed in the Student Code of Conduct, available in the office of the Dean of Student Services.

### Incomplete

If a student fails to complete all the required work for a course, an instructor may assign the grade of Incomplete ("I"). The student must complete the coursework by the end of the next quarter, or receive the assigned letter grade (usually an "F").

### F Grade

Students who fail a course will receive a letter grade of "F."

### Final Examination Schedule

The Social Science Division will adhere to the final examination schedule as stated in the BC Schedule. Final examinations will be held at the end of each quarter at fixed times. Instructors will not give examinations in advance of the regular schedule. A student who is absent from any examination held at any time during the quarter may forfeit the right to make up the examination. If, for illness or some other circumstance beyond the student's control, the student is unable to be present at any scheduled examination and has contacted the instructor on a timely basis, the student may be permitted to take such examination at a time designated by the instructor.

### Withdrawal From Class

College policy states that students must formally withdraw from a class by the end of the seventh week of the quarter (Registration Office, B125). If a student has not withdrawn by that date, an appropriate letter grade will be assigned for the course.

### Hardship Withdrawal

Instructors may assign the grade of "HW" (hardship withdrawal) at their discretion in the event that a student cannot complete the coursework due to extreme and exceptional circumstances. Students may also contact the Enrollment Services office BEFORE grades are assigned in cases of hardship.

### Students Who Require Disability Accommodations:

Students with disabilities who have accommodation needs are encouraged to meet with the Disability Resource Centre (DRC) office located in B132 (telephone 425.564.2498 or TTY 425.564.4110), to establish their eligibility for accommodation. The DRC office will provide each eligible student with an accommodation letter. Students who require accommodation in class should review the DRC accommodation letter with each instructor during the first week of the quarter.

Students with mobility challenges who may need assistance in case of an emergency situation or evacuation should register with Disability Resource Centre, and review those needs with the instructor as well.

### Distribution of Grades

Grades will not be posted in the Social Science Division or in faculty offices, and secretaries will not give out grades. Students should access their grades through the BC Web site.

### Return of Papers and Tests

Paper and/or Scantron score sheet returns will be arranged in the following ways ONLY: by mail, if student supplies the instructor with stamped, self-addressed envelope (with appropriate postage); or by the instructor designating a time and place whereby the student may retrieve his/her papers. Unclaimed papers and/or Scantron score sheets must be kept by the instructor for a minimum of sixty (60) instructional days following the end of the quarter.

.....  
*\*If you are accused of cheating, stealing exams and/or plagiarism, there is a Bellevue College Student Discipline and Appeals Procedure (the right to due process) which you may pursue. Contact the office of Division Chair (D110), the Dean of Student Services (B231A) or the Associated Student Body (C212) for information regarding the appeals process.*