



Course Syllabus and Instructor Information

1. **General Information:**

Alpha-numeric codification: GEOL 6115
Course Title: Volcanoes and their hazards
Section: 001#
Meeting days and time: By agreement
Course Location: F-303 and F-413
Contact Period: 3 hours of lecture per week

2. **Professor information:**

Name: Lizzette A. Rodríguez Iglesias, Ph.D.
Office: F-412 (Geology Dept., Physics Bldg.)
Phone: (787) 832-4040 x3583
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Office Hours: Tuesdays and Thursdays:
1:30-3:00 PM
*Other hours available by
appointment only

3. **Course Description:**

Volcanic Hazards: Causes, Effects, Assessment, Mitigation, Prediction, and Management. Analysis of Case Histories.

4. **Pre/Co-requisites and other requirements:**

None

5. **Course Objectives:**

- Discuss the different types of volcanic hazards, including case studies of each one.
- Discuss the different strategies used to reduce risk.
- Learn about volcano monitoring and techniques used at the currently erupting volcanoes in the world.
- Discuss the positive and negative effects of volcanoes and eruptions.

6. **Instructional Strategies:**

Conference
Discussion

7. Requirements:

All students are expected to:

- (1) Attend class all the time and on time.
- (2) Do all assigned readings, homework assignments and papers/projects.
- (3) Be prepared to participate in class by answering questions and participating in activities.
- (4) Check your e-mail (@upr.edu) all the time, for messages about the class.
- (5) Pass all tests to receive credit for the course.

8. Course time frame and thematic outline (*Subject to change*)

Week	Topic	Reading/Reference
1	Prontuario Introduction to Natural Hazards Types of Natural Hazards: Volcanic hazards	
2	Volcanic eruptions and Indices of activity Types of volcanic hazards: Lava flows	
3	VEPP Introduction and Exercise	
4	VEPP Exercise & Discussion Lava flows	
5	Lava flows Ballistic projectites & Tephra/Ash falls VEPP	Parícutin, 1943
6	Ballistic projectites & Tephra/Ash falls	Lanzarote, 1730-1736
7	Pyroclastic flows and surges Debris avalanches	
8	Debris avalanches (directed blasts/structure collapse)/ Lahars and jökulhlaups VEPP	Montagne Pelée, 1902
9	Lahars and jökulhlaups Volcanic gases (acid rain, atmospheric phenomena) Midterm Exam	Nevado del Ruiz, 1985
10	Volcanic gases (acid rain, atmospheric phenomena) VEPP	Laki, 1783 Lake Nyos 1986
11	Tsunamis VEPP	
12	Tsunamis Volcanic earthquakes and ground deformation Turn-in "VEPP/Kilauea project"	
13	Presentations (VEPP)	
14	How do we reduce risk?	

15	How do we reduce risk?	
16	Volcanism in the Caribbean <i>Turn-in "Volcano project"</i>	
17	<i>Presentations</i>	
	Examen final: <i>Se entrega trabajo final (To be announced)</i>	

9. Grading System

Quantifiable (letters)

Standard Curve:	100 – 90	A
	89 – 80	B
	79 – 65	C
	64 – 55	D
	54 –	F

10. Evaluation Strategies (*Subject to change*)

<u>Grades</u>	<u>Points</u>
Midterm exam	100
Paper & Presentation (Kilauea)	200
Volcano project I	150
Volcano project II	100
Final assignment	75
Quizzes, homework assignments, & group discussions	100
Attendance	<u>40</u>
Total (No extra credit)	765

**Midterm exam will be given during class hours. It will be in Spanish.*

11. Tentative evaluation schedule (*Subject to change*)

Midterm exam	Week 9
Paper Kilauea (written part)	Week 12
VEPP Presentations	Week 13
Volcano project (written part)	Week 16
Presentations	Week 17
Volcano project II	To be announced
Final Assignment	To be announced

12. Bibliography

Material will be taken from a number of books and scientific articles. Copies will be made available for students, in digital or printed form.

Class notes: **Lectures will be given in Spanish and will not be distributed until the exam date approaches - you need to come to class to see/hear them. When the power point presentations are posted, they will be at the course web site in <https://ecourses.uprm.edu/> – Instructions will be given in class about how to access the presentations.**

13. Regulations and Policies:

- **Class attendance** is compulsory. The University of Puerto Rico, Mayagüez Campus, reserves the right to deal at any time with individual cases of non-attendance. Professors are expected to record the absences of their students. Frequent absences affect the final grade, and may even result in total loss of credits. Arranging to make up work missed because of legitimate class absence is the responsibility of the student (Bulletin of Information Undergraduate Studies).

- **Absence from examinations:** Students are required to attend all examinations. If a student is absent from an examination for a justifiable reason acceptable to the professor, he or she will be given a special examination. Otherwise, he or she will receive a grade of zero or "F" in the examination missed (Bulletin of Information Undergraduate Studies).

- **Excuses from class or examinations:** ONLY WRITTEN EXCUSES WILL BE ACCEPTED. If a student is absent from an examination, he/she will have the opportunity to take a make-up test NO LATER than 5 days after the group took the exam. Make-up tests will be given only by appointment.

- **Policies on electronic devices:** Radios, tape recorders, and other audio or video equipment are not permitted in the classroom at any time. No cell phones are allowed to be in the ring mode during classes, neither students talking or sending messages with cell phones or other electronic device. The use of laptop computers during class is not allowed.

- **Cheating:** Cooperative work is not permitted on the quizzes or examinations. Cheating will be dealt with harshly. *All instances of cheating on examinations will be immediately reported to the Dean of Arts and Sciences for review.* There will be no exceptions to this policy.

- **Advice from the professor:** Please come to class each time. The three hours per week in this class are less than 2% of your time. No matter what you do in life, this class will help you understand the world around you. You need to buy the book. You need to read the book. You need to ask questions, talk to your classmates.

14. According to Law 51

Students will identify themselves with the Institution and the instructor of the course for purposes of assessment (exams) accommodations. For more information please call the Student with Disabilities Office, which is part of the Dean of Students office (Chemistry Building, room 019) at (787)265-3862 or (787)832-4040 extensions 3250 or 3258.