Course Syllabus
ISNS 3359 - 01
Department of Geosciences, School of Natural Sciences and Mathematics
The University of Texas at Dallas

Course Information

Course

Course Number/Section: ISNS 3359 - 01
Course Title: Earthquakes & Volcanoes
Term and Dates: Summer 2010 May 24th – August 11th 2010

Professor Contact Information

Professor: Dr. Ignacio Pujana
Office Phone: 972-883-2461
Email Address: pujana@utdallas.edu
Office Location: FA 2.402
Online and Office Hours: By appointment
Geosciences Department: 972-883-2401

About the Instructor

Ignacio Pujana, a Geologist with 15 years experience in academia, field studies and industry. Senior Lecturer and Researcher in the Geosciences Department for the last ten years. Teaching, “The Oceans”, Paleobiology, Introduction to Paleontology, Earth and Life History, and Geology Environment and Resources of Latin America. Previously taught in the University San Juan Bosco Argentina and Richland Community College. Research on Biostratigraphy of Mesozoic and Cenozoic sequences from Texas, Argentina, Tasmanian Sea, North Mexico, and Mariana Trench.

Course Pre-requisites, Co-requisites, and/or Other Restrictions
None

Course Description

This course provides a broad overview of the science behind earthquakes and volcanoes, new insights they provide about the architecture, processes, and evolution of the earth, and their impact on humankind and other organisms. The plate tectonics model provides the central framework in which the many aspects of earthquakes and volcanoes are described. This is an interdisciplinary science course offered in an online format. A flexible approach based on programmed self-instruction, with frequent tests to monitor progress, substitutes for the usual lecture with infrequent testing mode used in most courses. The course is divided into 10 sections (called Units), each of which corresponds to one or two chapters in the textbook. A Syllabus Quiz should be passed (can be repeated all times needed) in order to go on to test one, but those points do not count towards your grade. There is one test per Unit; therefore, the course consists of 10 tests.

Student Learning Objectives/Outcomes
Explain the basic divisions of the earth, their compositions, and their role in plate tectonics.

Recognize the types of plate boundaries and explain their relationship to crustal movement and mountain building.

Know the basics of crustal deformation and recognize geologic faults and structures.

Develop an understanding of the geology of earthquakes and volcanoes, with an emphasis on plate tectonic theory.

Discuss earthquake generation, measurement and prediction. Describe types of volcanoes, lava viscosity, composition and their relation to plate tectonics and volcano explosivity.

Become familiar with the terminology used to describe earthquakes and volcanoes.

Identify and understand the following classes of volcanoes: hot spot volcanoes, subduction zone volcanoes, island arc volcanoes, and mid-ocean ridge volcanoes.

Differentiate between the two different types of magmas - basaltic and granitic - and the relationship between each of them and their associated types of volcanoes.

Appreciate the relationship between human activity and geologic natural disasters with an historic perspective.

Understand the constructive and beneficial results of volcanoes.

Explore the subject of extra-terrestrial volcanism and Impacts

Required Textbooks and Materials

**Required Text**

The required text book is "Natural disasters" by Patrick Abbot seventh edition only. Careful only this Title and editions are supported.

Textbooks can be ordered online through UTD Bookstore. They could be also available at the Off-Campus Books. A wide offer of used textbooks is also available in many other electronic outlets fell free to explore it.

**Course Policies**

*Make-up exams*

Towards the end of the semester (Final week of classes) will be one opportunity to make up for the test with the lowest score. If you have an extraordinary situation please contact me immediately.

*Class Participation*

Students are required to login regularly to the online class site; there is a test each week. Virtual Classroom Citizenship

The same guidelines that apply to traditional classes should be observed in the virtual classroom environment. Please use proper netiquette when interacting with class members and the professor.

*Policy on Server Unavailability or Other Technical Difficulties*

The university is committed to providing a reliable online course system to all users. However, in the event of any unexpected server outage or any unusual technical difficulty which prevents students from completing a time sensitive assessment activity, the instructor will extend the time windows and provide an appropriate accommodation based on the situation. Students should immediately report any problems to the instructor and also contact the UTD eLearning Help
Requirements.
Students will:
- have regular access to a computer that meets the specifications outlined
- have regular access to a reliable Internet connection (56K minimum, high speed preferred)
- access e-Learning three times per week (minimum)

Knowledge/Attitude/Skills.
The online student must be:
- proficient using a computer
- disciplined to complete projects by deadlines
- a self starter with intrinsic motivation to read, write, and participate fully in class activities
- able to manage time effectively
- able/willing to work independently.
- willing to devote approximately 12 hours a week to a 3-credit course
- committed to academic honesty
- willing to contact the instructor immediately if a problem with course content should arise
- willing to contact technical support immediately should a technical issue arise

Technical Requirements

In addition to a confident level of computer and Internet literacy, certain minimum technical requirements must be met to enable a successful learning experience. Please review the important technical requirements and the web browser configuration information.

Course Access and Navigation

This course is developed using a web course tool called e-Learning. It is to be delivered entirely online. Students will use their UTD NetID account to login to the course through UTD Galaxy: Net ID Login or directly at http://elearning.utdallas.edu. Please see more details on course access and navigation information.

To get started with an eLearning course, please see the Getting Started: Student eLearning Orientation.

UTD provides eLearning technical support 24 hours a day/7 days a week. The services include a toll free telephone number for immediate assistance (1-866-588-3192), email request service, and an online chat service. The UTD user community can also access the support resources such as self-help resources and a Knowledge Base. Please use this link to access the UTD eLearning Support Center: http://www.utdallas.edu/elearninghelp.
Communications

This eLearning course has built-in communication tools which will be used for interaction and communication. Some external communication tools such as regular email and a web conferencing tool may also be used during the semester. For more details, please see communication tool information.

Interaction with Instructor: The instructor will communicate with students mainly using the Announcements and Discussions tools. Students may send personal concerns or questions to the instructor using the course email tool. The instructor will reply to student emails within 3 working days under normal circumstances. My office phone is 972-883-2461.

Student Resources

The following university resources are available to students:

UTD Distance Learning: http://www.utdallas.edu/oee/distance/students/cstudents.htm

McDermott Library: Distance Learners (UTD students who live outside the boundaries of Collin, Dallas, Denton, Rockwall, or Tarrant counties) will need a UTD-ID number to access all of the library’s electronic resources (reserves, journal articles, ebooks, interlibrary loan) from off campus. For UTD students living within those counties who are taking online courses, a Comet Card is required to check out materials at the McDermott Library. For more information on library resources go to http://www.utdallas.edu/library/distlearn/disted.htm.

Student Assessments

Grading Information

Weights

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Syllabus Quiz</td>
<td>0%</td>
</tr>
<tr>
<td>Test Units 1-10</td>
<td>85%</td>
</tr>
<tr>
<td>Report</td>
<td>15%</td>
</tr>
</tbody>
</table>

Grading Scale
Based on 10 Test grades, and the Oceanographic Report:

<table>
<thead>
<tr>
<th>Scaled Score (%)</th>
<th>Letter Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>97.1 -100</td>
<td>A+</td>
</tr>
<tr>
<td>93.1-97</td>
<td>A</td>
</tr>
<tr>
<td>90.1-93</td>
<td>A-</td>
</tr>
<tr>
<td>87.1-90</td>
<td>B+</td>
</tr>
<tr>
<td>83.1-87</td>
<td>B</td>
</tr>
<tr>
<td>80.1-83</td>
<td>B-</td>
</tr>
<tr>
<td>77.1-80</td>
<td>C+</td>
</tr>
<tr>
<td>73.1-77</td>
<td>C</td>
</tr>
</tbody>
</table>
Grades to the quizzes will be posted to your grade book automatically via eLearning. Your first score will be the score shown in the GRADE BOOK. You may take the quizzes two times. Unit tests require no specific score to “pass.” If you wish to improve your first grade a second attempt could be made in the allowed time (usually three days) and your two scores will be the averaged as the grade for that test.

Accessing Grades

Students can check their grades by clicking “My Grades” under Course Tools after the Availability period has ended (Monday 12:00 AM) and the grade for each assessment is released.

Assignments

One report about Earthquakes or Volcanoes is a required assignment (max- 100 points-15 % of your grade)
The purpose of this research papers is to familiarize you with a significant Earth event, of your choice. It should be related to earthquakes or volcanoes activity for this semester. More information will be posted on the “E&V Reports “an eLearning folder.

You will submit your assignment (in word for windows with your last name as file name) by using the Assignments tool on the course site. Please see the Assignments link on the course menu or see the icon on the designated page. You can click each assignment name link and follow the on-screen instructions to upload and submit your file(s). Please refer to the Help menu for more information on using this tool. Please note: each assignment link will be deactivated after the assignment due time. After your submission is graded, you may click each assignment’s “Graded” tab to check the results and feedback.

Online Tests

Academic Calendar

You can access the exams by clicking the Assessments link on the course menu or see the exam icon on the designated Folder. Each test is timed and can be attempted only two times within the scheduled time window: three days, (usually from Friday 12:30 AM to Sunday midnight). Please read the on-screen instructions carefully before you click “Begin Assessment”. Once it starts you’ll have 20 minutes to complete the test.

<table>
<thead>
<tr>
<th>WEEK</th>
<th>Unit</th>
<th>CHAPTER</th>
<th>Topic</th>
<th>Assignments and Assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/11</td>
<td>1</td>
<td>1</td>
<td>Introduction</td>
<td>Read Syllabus, check all necessary plug ins in your computer. Pass the “Syllabus Quiz” no points will be counted towards your grade but it has to be passed to go on Unit 1 Test Syllabus Quiz: Monday 24th unlimited</td>
</tr>
<tr>
<td>Date</td>
<td>Week</td>
<td>Chapter</td>
<td>Topic</td>
<td>Action Details</td>
</tr>
<tr>
<td>-------</td>
<td>------</td>
<td>---------</td>
<td>--------------------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>2/11</td>
<td>1</td>
<td>1</td>
<td>Chapter 1 Natural Disasters and the Human Population</td>
<td>Read Chapter 1 on textbook, Go to Folder UNIT1: Presentations, Flash Cards, Glossaries and links. Take Quiz Unit 1 available Friday 05/28 (12:30 AM) and expires Sunday 05/30 (Midnight). This result is what will count towards your final grade. Maximum Two attempts and the average will make your grade on the Test.</td>
</tr>
<tr>
<td>3/11</td>
<td>2</td>
<td>2</td>
<td>Chapter 2 Energy Flows in Earth History and Natural Disasters</td>
<td>Read Chapter 2 on textbook, Go to Folder UNIT2: Presentations, Flash Cards, Glossaries and links. Take Test Unit 2 available 06/04/10 to 06/06/10.</td>
</tr>
<tr>
<td>4/11</td>
<td>3</td>
<td>3</td>
<td>Chapter 3 Earthquakes and Plate Tectonics</td>
<td>Read Chapter 3 on textbook, Go to Folder UNIT 3: Presentations, Flash Cards, Glossaries and links. Take Test Unit 3 available 06/11 to 06/13.</td>
</tr>
<tr>
<td>5/11</td>
<td>4</td>
<td>4</td>
<td>Chapter 4 Basic Principles of Earthquake Geology and Seismology</td>
<td>Read Chapter 4 on textbook, Go to Folder UNIT 4: Presentations, Flash Cards, Glossaries and links. Take Test Unit 4 available 06/18 to 06/20.</td>
</tr>
<tr>
<td>6/11</td>
<td>5</td>
<td>5</td>
<td>Chapter 5 Tsunami</td>
<td>Read Chapter 5 on textbook, Go to Folder UNIT 5: Presentations, Flash Cards, Glossaries and links. Take Unit 5 Test available 06/25 to 06/27.</td>
</tr>
<tr>
<td>7/11</td>
<td>6</td>
<td>6</td>
<td>Chapter 6 Some Earthquakes in Western North America</td>
<td>Read Chapter 6 on textbook, Go to Folder UNIT 6: Presentations, Flash Cards, Glossaries and links. Take Unit 6 Test available 07/02 to 07/05. Take one more day Happy fourth!</td>
</tr>
<tr>
<td>8/11</td>
<td>7</td>
<td>7</td>
<td>Chapter 7 Earthquakes in Continental US and Canada plus Hawaii</td>
<td>Read Chapter 7 on textbook, Go to Folder UNIT 7: Presentations, Flash Cards, Glossaries and links. Take Unit 7 Test available 07/09 to 07/11.</td>
</tr>
<tr>
<td>9/11</td>
<td>8</td>
<td>8</td>
<td>Chapter 8 Volcanic Eruptions: Plate Tectonics and Magmas</td>
<td>Read Chapter 8 on textbook, Go to Folder UNIT 8: Presentations, Flash Cards, Glossaries and links. Take Unit 8 Quiz available 07/16 to 07/18.</td>
</tr>
<tr>
<td>10/11</td>
<td>9</td>
<td>9</td>
<td>Chapter 9 Volcano Case Histories: Killer Events</td>
<td>Read Chapter 9 on textbook, Go to Folder UNIT 9: Presentations, Flash Cards, Glossaries and links. Take Unit 9 Quiz available 07/23 to 07/25.</td>
</tr>
<tr>
<td>11/11</td>
<td>10</td>
<td>17</td>
<td>Chapter 17 Impacts with Space Objects</td>
<td>Read Chapter 17 on textbook, Go to Folder UNIT 10: Presentations, Flash Cards, Glossaries and links. Take Unit 10 Quiz available 07/30 to 08/01.</td>
</tr>
</tbody>
</table>

Assignment deadline: Report (Earthquake or Volcano) Due 08/02

Top

Scholastic Honesty

The University has policies and discipline procedures regarding scholastic dishonesty. Detailed information is available on the UTD Judicial Affairs web page. All students are expected to maintain a high level of responsibility with respect to academic honesty. Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Since such dishonesty harms the individual, all students and the integrity of the University, policies on scholastic
dishonesty will be strictly enforced. Precise and detailed tracking of all online activities is a characteristic of the e-Learning system. Anything you do while log on the system is recorded.

Top

University Policies

Student Conduct & Discipline

The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UTD publication, *A to Z Guide*, which is provided to all registered students each academic year.

The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the *Rules and Regulations, Board of Regents, The University of Texas System, Part 1, Chapter VI, Section 3*, and in Title V, Rules on Student Services and Activities of the university’s *Handbook of Operating Procedures*. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391).

A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents’ Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.

Academic Integrity

The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work.

Scholastic dishonesty includes, but is not limited to, statements, acts or omissions related to applications for enrollment or the award of a degree, and/or the submission as one’s own work or material that is not one’s own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings.

Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university’s policy on plagiarism (see general catalog for details). This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.

Email Use
The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's U.T. Dallas email address and that faculty and staff consider email from students official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of all individual corresponding and the security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.

Withdrawal from Class

The administration of this institution has set deadlines for withdrawal of any college-level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, I cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.

Student Grievance Procedures

Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's Handbook of Operating Procedures.

In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called "the respondent"). Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level, the grievance must be submitted in writing to the respondent with a copy of the respondent’s School Dean. If the matter is not resolved by the written response provided by the respondent, the student may submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean's decision, the student may make a written appeal to the Dean of Graduate or Undergraduate Education, and the deal will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic appeals process will be distributed to all involved parties.

Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.

Incomplete Grade Policy

As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester’s end and only if 70% of the course work has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of F.
Disability Services

The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Disability Services is located in room 1.610 in the Student Union. Office hours are Monday and Thursday, 8:30 a.m. to 6:30 p.m.; Tuesday and Wednesday, 8:30 a.m. to 7:30 p.m.; and Friday, 8:30 a.m. to 5:30 p.m.

The contact information for the Office of Disability Services is:
The University of Texas at Dallas, SU 22
PO Box 830688
Richardson, Texas 75083-0688
(972) 883-2098 (voice or TTY)

Essentially, the law requires that colleges and universities make those reasonable adjustments necessary to eliminate discrimination on the basis of disability. For example, it may be necessary to remove classroom prohibitions against tape recorders or animals (in the case of dog guides) for students who are blind. Occasionally an assignment requirement may be substituted (for example, a research paper versus an oral presentation for a student who is hearing impaired). Classes enrolled students with mobility impairments may have to be rescheduled in accessible facilities. The college or university may need to provide special services such as registration, note-taking, or mobility assistance.

It is the student’s responsibility to notify his or her professors of the need for such an accommodation. Disability Services provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals requiring special accommodation should contact the professor after class or during office hours.

Religious Holy Days

The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, Texas Code Annotated.

The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment. The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.

If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.

Off-Campus Instruction and Course Activities
Off-campus, out-of-state, and foreign instruction and activities are subject to state law and University policies and procedures regarding travel and risk-related activities. Information regarding these rules and regulations may be found at the website address given below. Additional information is available from the office of the school dean.
(http://www.utdallas.edu/BusinessAffairs/Travel_Risk_Activities.htm)

*These descriptions and timelines are subject to change at the discretion of the Professor.*