Instructor: Don Reed (yes, I am a doctor, Ph.D., and full professor, but just call me “Don”)  
Office Location: 305 Duncan Hall  
Telephone: (408)-924-5036 (not the best way to reach me, see below)  
Video Conference: Video chat is available through Blackboard Collaborate in Canvas  
Email/Discussion: The best and most efficient way to reach the instructor is by posting in the Don’s Office discussion in Canvas since other students may be able to answer your question and may benefit from your question.  
If it is a highly personal matter, then use Inbox Conversation tool within Canvas. Email sent on Friday may not be answered until Monday morning at noon.  
Office Hours at SJSU: M: 3:00-4:00 pm or by appointment  
Online Office Hours: Thurs. 12:00-1:00 pm in Blackboard Collaborate or by appointment via Skype voice or video (Skype Name: dreed100), FaceTime (dreed@sjsu.edu) or WebEx  
Course Website: Canvas at http://www.sjsu.edu/at/ec/canvas/  
Prerequisites: Completion of core GE courses, satisfactory completion of WST test, and upper division standing; completion of, or co-registration in, 100W.  
GE/SJSU Studies Category: Area R: Earth and Environment  

Course Website and Use of Canvas  
We will use Canvas (http://www.sjsu.edu/at/ec/canvas/ ) for accessing current greensheet, weekly assignments, online lectures, required reading assignments, electronic discussions with students and the instructor, all email associated with the class, and possibly submitting graded assignments and taking some quizzes and exams.  
For those unfamiliar with using Canvas, information can be found at: http://www.sjsu.edu/at/ec/canvas/student_resources/index.html
**Course Description**

This course will focus on the how, where and why earthquakes and volcanic eruptions occur. Analysis of hazards posed by earthquakes and volcanoes. Risks incurred by humankind due to these hazards. Minimizing risk; economic, social and political problems associated with earthquakes.

The course will be comprised of four integrated modules, consisting of classroom and online activities, lectures and a field trip. These units are:

1. Investigating earthquakes
2. Global earthquakes
3. Seismic hazards in bay area
4. Earthquake preparedness

This course meets Area R for SJSU Studies requirements.

Now required in all SJSU greensheets:

"Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of forty-five hours over the 10 week-length of the course (normally 4.5 hours per unit per week with 1.5 of the hours used for lecture) for instruction or preparation/studying or course related activities including but not limited to internships, labs, clinical practica. Other course structures will have equivalent workload expectations as described in the syllabus."

To satisfy the requirement above for a 3-unit class, students should spend a total of 135 hours on this class during this 10 week-long special session for an average of 13-14 hours per week.

**Course Goals and SJSU Studies Area R Student Learning Objectives**

Upon successful completion of this course, students will be able to:

1) appreciate the methods and limitations of scientific investigations of earthquakes; (Learning Outcome #1)
2) distinguish between science and pseudo-science of earthquake forecasting; (Learning Outcome #2)
3) apply the methods of science to a problem involving the earth and environment; (Learning Outcome #3)

Students will also increase their understanding of:

1) the occurrence, measurement and mechanics of earthquakes,
2) earthquakes as a local, regional and global phenomena of special interest to the diverse societies of the Pacific Rim, including the multicultural population of California
3) earthquake hazards in the bay area,
4) earthquake safety and preparedness in the home and workplace,
Required Reading Assignments

There is no textbook, instead assigned reading assignments will be available each week for download from the course website.

Other equipment / material requirements

Students must have broadband access to an internet-connected computer.

In order to speak with the instructor online, students should purchase an inexpensive headset with a microphone or webcam ($18-$25 at Best Buy, Amazon, Fry's, Radio Shack, Spartan Bookstore and others).

Colored Pencils

Calculator (necessary for course work and in-class exams)

Nature of Weekly Work and Responsibilities of Students

This is an online course, which will require self-discipline to schedule the time to complete the work each week.

Students will play an active role in their learning through their participation in class and the timely completion of online and field trip activities.

My experience in online teaching over the past 15 years at SJSU shows that the biggest threat to student learning in an online class is procrastination, in other words, students putting the weekly work off to the last minute and then not completing assignment in time, and rushing through the material, to meet due date deadlines.

Grades in my other online classes improved markedly, with far fewer D’s and F’s, when three deadlines for the assignments were implemented each week, much like the format of a class that meets three times a week, for example, a Monday-Wednesday-Friday class. Consequently, course material will be put online each week on Monday, Wednesday and Thursday by 3 pm. Students may complete the weekly assignments at their convenience each week between the deadlines listed in course schedule.

The instructor may also hold online video sessions with individual students, learning groups or entire class.

The material will be presented in unit modules (I, II, II, and IV), each building of the previous unit. Students will work within learning groups of 5-6 students, and will be responsible and accountable to other students in their complete to complete the work in a time manner.
The material will be presented in activities, typically two per week, and include segments of YouTube videos, animations, online applets, and commercially produced video programs.

Each of the first three units will end in an online exam and the fourth unit will end in the final.

**Virtual Field Trip**

Students will take a virtual field trip along the Hayward fault, provided by the U.S. Geological Survey.

**Late Drops**

Students are responsible for understanding the policies and procedures about add/drops and academic renewal.

Students initiate a late drop by consulting the appropriate information at [http://www.sjsu.edu/aars/policies/latedrops/](http://www.sjsu.edu/aars/policies/latedrops/).

Students should be aware of the penalties for adding and dropping classes [http://www.sjsu.edu/aars/policies/latedrops/policy/](http://www.sjsu.edu/aars/policies/latedrops/policy/).

Students should be aware of the current deadlines for adding and dropping classes, which can be found in academic calendar for the current academic year [http://www.sjsu.edu/provost/services/academic_calendars/index.html](http://www.sjsu.edu/provost/services/academic_calendars/index.html).

**Assignments**

Grades in the class are based on combination of assignments, listed individually below, resulting in a total of 1000 points. **No extra credit is available in the class.**

**Area R Writing Requirements**

It is now required that all SJSU Studies GE courses have at least 3000 words of written assignments, which is about 9 pages of double-spaced text. SJSU course regulations also specify that this requirement be spread across more than one assignment in order to give appropriate feedback on the quality and form of writing. Every writing assignment will promote reflective processes and critical analysis while being assessed for grammar, clarity, conciseness and coherence. The 3000 word writing requirement is covered by the field trip report (1000-1100 words), a discussion on earthquake prediction, essay (360 words) in unit III of the class, and an earthquake preparedness plan as part of the final (1700 words) in Unit IV.

All writing assignments will first be submitted to Criterion for grammar review, after which text should be edited and corrected, and then to www.turnitin.com within Canvas for originality review. Moreover, students will use feedback from their fellow students, via peer review, on each writing assignment to improve the quality of the subsequent writing assignment. After completing these three steps, then students may submit their work to appropriate listing in assignment area.
Assignments

Activities (125 points – 12.5% of grade)

Following the completion of each activity, students will work within learning groups by posting two multiple-choice questions on the material covered in the activity. Each student will then review, for clarity and quality, and then answer the questions posted by another student, located immediately above their own posting in their learning group discussion. Students will then work with their learning group to compile a quiz of the top 6 questions and post it in their discussion area with the correct answers highlighted in bold.

Keeping a detailed record of observations in experiments or field projects is an important part of all scientific investigations, in order to replicate the results for experimental verification. Consequently, students are required to compile a record of their work in Units 1, 2 and 3 of the class in the form of a portfolio of their completed activities. The portfolio should be brought to every classroom meeting and will serve as a study guide to prepare for exams and course assignments, including the final exam.

Unit I, II, and III Exams (540 points - 54% of course grade)

Student will complete three exams, one following each of the first three subject units in the class (Units I, II and II). Each exam will last 1 hour and 15 minutes and take place online;

Students must work alone during exam and any violation will result in a failing grade on exam (0 points) and will be reported as a violation of the SJSU Policy on Academic Integrity.

Exams will consist of 15 multiple-choice questions, in some cases, derived from the lists of questions developed during weekly activities.

Students will then be presented with essay question on the methods and limits of scientific investigation involving a subject covered in that particular unit. By successfully answering the question, students will meet GE Area R learning outcome 1 – see list under “Course Goals and Student Learning Objectives” in this greensheet.

Any request for a change in the date and time of exam for specific personal circumstances, such as personal illness, must be emailed or called in to the instructor before the start of the exam period. Students who do not take exam within scheduled period and do not contact the instructor in advance of exam will be assessed a late penalty of 20 points for each 24-hour period after scheduled end of exam.

Earthquake Forecasting Essay (75 points – 7.5% of grade)

Students will share their well-informed opinion, based on research in the class, with their learning group on the trial of scientists following the 2009 L'Aquila earthquake.
This discussion will then be the basis of a one page essay (350-400 words), double-spaced, on distinguishing science from pseudoscience in earthquake forecasting and prediction. Each student will provide a peer-review of the work of two other students in their learning group. By successfully completing this assignment, students will meet GE Area R learning outcome 2 – see list under “Course Goals and Student Learning Objectives” in this greensheet.

**Virtual Field Trip Report (150 points – 15% of course grade)**

The virtual field trip will involve a report, worth 150 points, in which students will document scientific evidence of the recent activity along the Hayward fault (1000 words of narrative, plus bibliography and photographs). By completing this assignment, students meet GE Area R learning outcome 3 – see list under “Course Goals and Student Learning Objectives” in this greensheet.

**Final Exam (110 points – 11% of course grade)**

Students will submit an analysis of the earthquake safety preparedness plan of their house or apartment. Part of the score may be allocated to preparation or rough drafts of their plan and providing a peer-review of the plans for three other students.

One objective of the assignment is to assess the quality of student writing (not the ability to use quotations). Consequently, students shall NOT directly copy material, word for word, from any publication, including web sites, even if enclosed in quotation marks. The preparedness plan will be submitted in the Assignment area of Canvas and automatically undergo an originality check at www.turnitin.com. By completing this assignment, students will meet GE Area R learning outcomes 1 and 3 – see list under “Course Goals and Student Learning Objectives” in this greensheet.)
Grading Policy

Due Dates and Late Policy on All Graded Assignments

It is the responsibility of each student to follow the due dates in the Course Schedule section of this greensheet. Point deductions will be assessed for all work submitted after the due dates:

- 0-6 hours late – 5% deduction of total points possible
- 6-24 hours after deadline – 10% deduction of total points possible
- 25-48 hours after deadline – 20% deduction of total points possible
- Late submissions will not be accepted if more than 48 hours after deadline

Course Grade (1000 points)

A minimum aggregate GPA of 2.0 in SJSU Studies (R, S, & V) shall be required of all students obtaining a first baccalaureate degree at SJSU.

The course grade will be based on a combination of unit exams and portfolios, online discussions, field trip reports and final exam for a combined total of 1000 points. Keep track of scores in Canvas Grades area to determine your grade at anytime during course.

Letter grades are not assigned individual assignments, but can be estimated using the percentage of points awarded out of the total points possible and by applying the scale below.

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-92%</td>
<td>A</td>
</tr>
<tr>
<td>91.9-90%</td>
<td>A-</td>
</tr>
<tr>
<td>89.9-88%</td>
<td>B+</td>
</tr>
<tr>
<td>87.9-82%</td>
<td>B</td>
</tr>
<tr>
<td>81.9-80%</td>
<td>B-</td>
</tr>
<tr>
<td>79.9-78%</td>
<td>C+</td>
</tr>
<tr>
<td>77.9-72%</td>
<td>C</td>
</tr>
<tr>
<td>71.9-70%</td>
<td>C-</td>
</tr>
<tr>
<td>69.9-68%</td>
<td>D+</td>
</tr>
<tr>
<td>67.9-62%</td>
<td>D</td>
</tr>
<tr>
<td>61.9-60%</td>
<td>D-</td>
</tr>
</tbody>
</table>

Below 60% = F

The percentage scale above can also be used to determine course letter grade at anytime in the course by calculating the percentage of total points earned out of total points available on all graded assignment at that time.

At the end of the course, letter grades will be based on the following scale:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000-915</td>
<td>A</td>
</tr>
<tr>
<td>914-895</td>
<td>A-</td>
</tr>
<tr>
<td>894-875</td>
<td>B+</td>
</tr>
<tr>
<td>874-815</td>
<td>B</td>
</tr>
<tr>
<td>814-795</td>
<td>B-</td>
</tr>
<tr>
<td>794-775</td>
<td>C+</td>
</tr>
<tr>
<td>774-715</td>
<td>C</td>
</tr>
<tr>
<td>714-695</td>
<td>C-</td>
</tr>
<tr>
<td>694-675</td>
<td>D+</td>
</tr>
<tr>
<td>674-615</td>
<td>D</td>
</tr>
<tr>
<td>614-595</td>
<td>D-</td>
</tr>
<tr>
<td>594 or less</td>
<td>F</td>
</tr>
</tbody>
</table>

University Policies

Academic Integrity

Each student’s commitment to learning, as evidenced by their enrollment at San Jose State University and the University’s integrity policy, require all students to be honest in all academic course work.
Students should know that the University’s Academic Integrity Policy is available at http://www.sjsu.edu/studentconduct/students/Student_Academic_Integrity_Process/index.html

Faculty members are required to report all infractions, either cheating on assignments of plagiarism, to the office of Student Conduct and Ethical Development (http://www.sjsu.edu/studentconduct/)

Tutorials on plagiarism can be found at http://tutorials.sjlibrary.org/tutorial/plagiarism/index.htm

As in any university work, students can use ideas and concepts from web sites or publications, if the source is properly cited. However, “word for word” copying of sentences from articles or web sites, or using quotations, does not meet the Area R writing requirement and is therefore forbidden in this class.

Instances of academic dishonesty, such as cheating on exams or plagiarism on writing assignments, for example, presenting the work of another student as your own on an exam, or the use of another person’s text in writing assignments without giving proper credit, will result in a “0” grade, plus additional point penalties, generally negative point deductions of the magnitude of specific assignment (e.g. 100 pt. assignment, -100 point score on assignment) and sanctions by the University.

For this class, all assignments, including electronic discussions, writing assignments and exams, are to be completed by the individual student unless otherwise noted in instructions. Evidence of collaborating with another person while taking a quiz or exam will result in an “F” in the class and submission of Academic Integrity Violation Report to the university. Students who provide information about exams, or material for writing assignments, to other students will also be subject to the penalties described above. If you would like to include in your assignment any material you have submitted, or plan to submit for another class, please note that SJSU’s Academic Policy F06-1 requires approval of instructors.

Campus Policy in Compliance with the American Disabilities Act

If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 requires that students with disabilities requesting accommodations must register with the Accessible Education Center (AEC) to establish a record of their disability.

Canvas Problems

For students experiencing technical problems with Canvas (eg, unable to log in, need password re-set, etc.), please contact San Jose State University’s Information Technology Support Services (ITSS) at 408-924-2377, or email at helpdesk@sjsu.edu. ITSS is located on the first floor of the Academic Success Center in Clark Hall, if students wish to speak with someone in-person.
Learning Assistance Resource Center

The Learning Assistance Resource Center (LARC) is located in Room 600 in the Student Services Center. It is designed to assist students in the development of their full academic potential and to motivate them to become self-directed learners. The center provides support services, such as skills assessment, individual or group tutorials, subject advising, learning assistance, summer academic preparation and basic skills development. The LARC website is located at http://www.sjsu.edu/larc/.

SJSU Writing Center

The SJSU Writing Center is located in Room 126 in Clark Hall. It is staffed by professional instructors and upper-division or graduate-level writing specialists from each of the seven SJSU colleges. These specialists have met a rigorous GPA requirement, and they are well trained to assist all students at all levels within all disciplines to become better writers. The Writing Center website is located at http://www.sjsu.edu/writingcenter/about/staff/.
Course Schedule

The course schedule is subject to change with fair notice through messages in Canvas Inbox (Conversations) or postings on course homepage in Canvas. The first meeting each week will be available each Monday by 3 pm, the second meeting will be available by Wednesday at 3 pm, and the third meeting by Thursday at 3 pm.

<table>
<thead>
<tr>
<th>Week</th>
<th>Meeting Number, Day of Week, Canvas, Topics and Assignments</th>
</tr>
</thead>
</table>
| 1    | 10/3-10/6 | Unit I – Investigating earthquakes  
Activity #1 - What is an Earthquake? What is a fault?  |
| 2    | 10/7-10/13 | Activity #2 - Fault Slip & Seismic Waves  
Activity #3 - Measuring an Earthquake I  |
| 3    | 10/14-10/20 | Activity #4 - Measuring an Earthquake II  
Activity #5 - Plate Tectonics  
Activity #6 - Measuring an Earthquake III  |
| 4    | 10/21-10/27 | Activity #7 – Earthquakes and Plate Tectonics;  
Activity #8 – Aftershocks, Fault Rupture and Energy Released;  |
| 5    | 10/28-11/3 | Unit II – Global Earthquakes  
Activity #9 – The Great Earthquakes;  
Unit I Exam - Available Thurs. at 1 pm to Fri. at 9 pm  
Activity #10 – 2004 Indian Ocean Earthquake;  |
| 6    | 11/4-11/10 | Activity #11 – 2004 Indian Ocean Tsunami;  
Activity #12 – Tsunamis;  
Activity #13 Th – 2011 Japan Earthquake;  |
| 7    | 11/11-11/17 | Activity #14 – NanTroSEIZE;  
Activity #15 - 1700 Pacific Northwest Earthquake & Tsunami  
Unit III - Seismic Hazards in Bay Area  
Activity #16 – Bay Area Fault Systems;  |
| 8    | 11/18-11/24 | Unit II Exam - Available Thurs. at 1 pm to Fri. at 9 pm  
Activity #17 – 1906 San Francisco Earthquake;  
Activity #18 – The Hayward Fault;  |
| 9    | 11/25-12/1 | Activity #19 - Hayward Fault Virtual Trip;  
Activity #20 – Earthquake Recurrence & Prediction;  |
| 10   | 12/2-12/8 | Hayward Fault Study Due Tuesday by 4 pm  
Activity #21– Scientists on Trial  
Activity #22 – Seismic Hazards;  
Unit IV – Earthquake Preparedness  
Activity #23 - Personal Earthquake Preparedness Plan;  |
| 11   | 12/9-12/15 | Unit III Exam - Available Thurs. at 1 pm to Fri. at 9 pm  
Activity #24 - Compilation of Earthquake Preparedness Plans;  
Activity #25 - Revise Group Plan into Personal Plan  |
| 12   | 12/16-12/19 | Activity #26 – Peer Review Earthquake Preparedness Plans in Group  
Final Exam on Thursday Dec. 19 at 5:00 pm - Submit Earthquake Preparedness Plan |