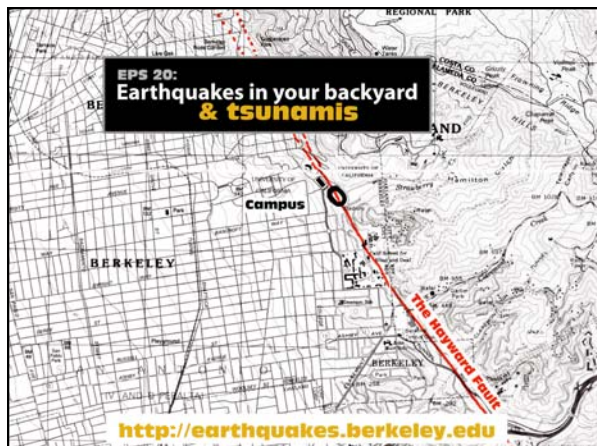


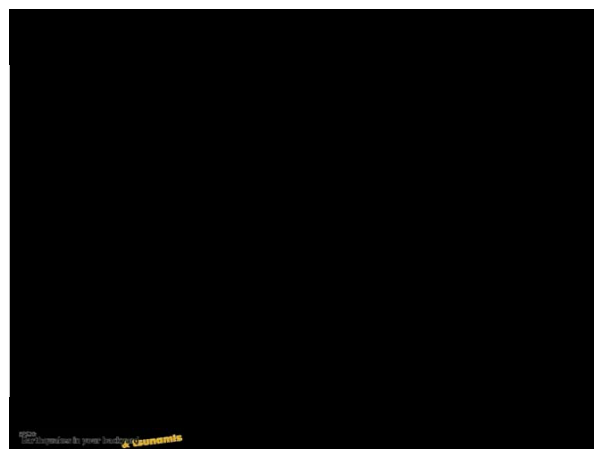
EPS20: Earthquakes in your backyard



What do earthquakes mean to you?

EPS20 Earthquakes in your backyard & tsunamis

California and earthquakes



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What was science?

What was fiction?

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California and earthquakes

Early origins

Earthquakes associated with giant creatures that supported the Earth




Japan: **catfish**
China: **frog**
Philippines: **snake**
Native Americas: **turtle**

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Early origins



Sparta
464 BCE
nisee



Aristotle (384-322 BCE)
Strong winds blew through caves inside the Earth, creating "effects similar to those of the wind in our bodies whose force when it is pent up inside us can cause tremors and throbbings."

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Early origins
Christian Europe



Rimini, Italy, 1308 - nisee




Rhodes
1481
nisee

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1906 Earthquake: "The Lawson Report"
A turning point for earthquake science



Prof. Andrew Lawson
UC Berkeley

- Cataloged descriptions of earthquake effects
- Identified the San Andreas Fault
- Maps of the fault location and ground shaking distribution
- Elastic rebound theory

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What this class is about

The earthquake process

- Earthquake locations
- Faults
- Building towards an earthquake

Earthquake impacts

- Ground shaking
- Liquefaction and landslides
- Building damage and collapse
- Economic impacts

What can we do?

- Personal preparedness
- UC Berkeley SAFER program


All with a focus on

- UC Berkeley
- The Bay Area
- California

What would you like to talk about?

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Class organization


Class website: <http://earthquakes.berkeley.edu>


Instructor
Richard Allen – rallen@berkeley.edu
Office hours: Tue, Thu 9-10 am or by appointment
Office: 279 McCone Hall

GSI – office hours TBA

- Holly Brown - hollybrown@berkeley.edu
- Gilead Wurman - gwurman@seismo.berkeley.edu
- Val Zimmer - valzimmer@berkeley.edu

Email announcements
Class announcements will be sent by email
➔ be sure that the registrar's office has the email address you use!

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Class organization

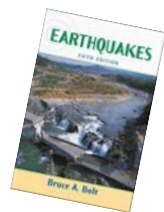
Class website: <http://earthquakes.berkeley.edu>


Expectations
1. Lecture attendance: Tue Thu 3pm


Lecture notes

- PowerPoint slides are on the website – click on “Lectures”
- ASUC Lecture Notes??
- Podcast??

Readings
Textbook: “Earthquakes” (5th edition) by Bruce Bolt. Published by Freeman.
Other required reading will be posted on the web



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Expectations
2. Assignments: Five during the semester

- Approximately every two weeks
- Due dates on the syllabus
- Can be completed individually or in groups
You are encouraged to work together and discuss the problems, but then you should write down *your own answers*
- They will be assigned 1-2 weeks prior to the due date

Getting help

- You will be assigned to a GSI
- They will be happy to assist with the assignments during their office hours

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Class organization


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Expectations
3. Field trip attendance and report

Field Trip I: **The Hayward Fault** – about 2 hrs
September 18th – 21st – Multiple time slots will be available

Field Trip II: **Berkeley Landslides** – about 2 hrs
November 6th – 9th – Multiple slots will be available

The field trip reports will be due one week after the trip

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Grading


- 15% - Midterm I – October 4th in class
- 15% - Midterm II – November 6th in class
- 30% - Final – December 16th 12:30-2:30pm – check for location
- 15% - Field trip reports
- 25% - Assignments: 5% for each of 5 assignments

Extra credit – opportunities will be announced in class

No late work will be accepted unless with the **prior** approval of an instructor.

No electronic submissions unless with the **prior** approval of an instructor.

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Class organization - website

All this information is at <http://earthquakes.berkeley.edu>

click on:

- “Organization” for contact info, grading, sections and more
- “Syllabus” for an up-to-date version of the syllabus containing all due dates
- “Lectures” for the lecture notes, readings and quick web exercises
- “Assignments” to download assignments
- “Field trips” for field trip participation and report instructions
- “bSpace” for GSI and fieldtrip assignment, posting grades

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next week...


Future earthquakes
The Hayward Temblor

"There is no problem so big, so important, that you can't run away from it."

Read Marc Reisner's scenario earthquake:
 "What follows is pessimism that could be worse."

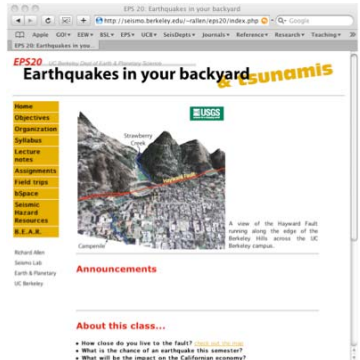



You can download a pdf from the "lectures" tab of the website

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Class website: <http://earthquakes.berkeley.edu>

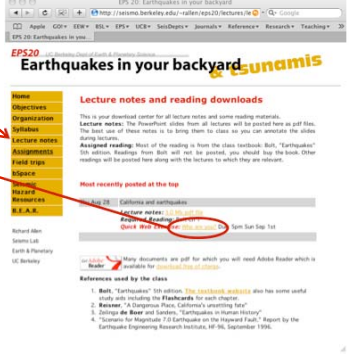
Class website



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Class website



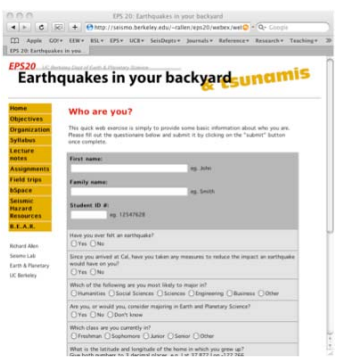
Click "Lecture notes"

Quick web exercise


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Class website: <http://earthquakes.berkeley.edu>

Quick web exercise



Due 5pm
 Friday
 Aug 28th

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