Independent Study Presentations

An eight minute presentation on the topic of your choosing. Plan for no more than six slides. Include an outline your talk, critical figures conclusions, and references on a one or two page Xerox handout to be given to your fellow students. Plan for 30 copies. Your talk will be during the last week of classes.

Our goal is to let you explore a topic of your choosing, to teach you how to learn, educate us, and to develop presentation skills. Making the handout ensures your organization and guarantees that your audience will get the message.

Choose a topic you want to know more about. If it is something we have covered in class you are obligated to dig significantly deeper. There are also many other topics we have not covered in class. First look for references is in your book; several textbooks in structural geology are on reserve in the library. **Topics must be approved by Casey.** See me after class or in my office or email me (casey@ucsc.edu).

Suggested subjects are topical not regional. Regional topics are only permitted if they illustrate some important topical point.

Suggestions

- Plate Tectonics: Structural Features of....
  - Divergent Plate Boundaries
  - Rift Valleys
  - Convergent Plate Boundaries/Accretionary Prisms
  - Transform Faults
  - Hot Spots
  - Plate Kinematics
  - Passive Continental Margins
- Measurement of Strain
- Deformation Mechanisms (in general, around folds, faults)
- Pressure Solution
- Thrust Belts
- Salt Tectonics
- Mud Diapirs
- Deformed Plutons
- Kinematic Indicators
- Gravity Tectonics
- Petrofabrics-Quartz Fabrics
- Microstructures
- Microstructures
- Rheology
- Low Angle Normal Faults/Core complexes/Gneiss Domes
- Stress Measurement
- Mylonites
- Crack-Seal Deformation
- Fault Systems
- Strain Distribution Around Structures (Faults, Folds)
Fluid migration including petroleum in the earth

**Topics Chosen by Students in Past**

Salt Tectonics
Mud Diapirs
Gravity Tectonics
Nappes
Structure of Ore Deposits
Rift Valleys
Continental Rifts
East African Rift
Rio Grande Rift
Triggers of Failure
Impact Structures
Boudinage
Hot Spots
Pressure Solution
Material Sciences and Structure
Impact structures—Structural Aspects
Mud Diapirs and Volcanoes
Earthquake Seismology and Structural Geology
Paleomagnetism and Structural Geology
Strike-Slip Tectonics
Cordilleran Geologic History (too broad, try to focus more)
Himalayas: A Collision Mountain Belt