Review Sessions for Lab Exam 1:

Open lab times are in Harrington Hall 113/114 (the Physical Geology Lab and the adjacent lab room).
Friday (2/22): 9:00 AM - 5:00 PM No Geology Tutor -- lab will be open and samples available to review
Sunday (2/24): 6:00 - 8:00 PM with Geology TA's
Monday (2/25): 8:30 AM - 1:00 PM No Geology Tutor -- lab will be open and samples available to review
Monday (2/25): 5:30 - 7:30 PM with Geology Tutor & TA
Tuesday (2/26): 5:30 - 7:30 PM with Geology Tutor & TA
Wednesday (2/27): 5:30 - 7:30 PM with Geology Tutor & TA
Thursday (2/28): 9:00 AM - 1:00 PM No Geology Tutor -- lab will be open and samples available to review

This Exam will begin at the start of lab and will include questions from the first three labs.

Lab 1: Density, Isostasy & Plate Tectonics (you will be provided with a calculator and a ruler)

- Know the approximate (average) densities of ocean crust, continental crust, and asthenosphere and how
  they behave isostatically (i.e., do they sink, float, float high/float low, etc).
- Be able to calculate density when given mass and volume.
- Be able to compare the densities of different materials and how they would behave isostatically.
- Be able to use the bouyancy equations (below) that you used in lab to calculate the height of the crust floating above or below the asthenosphere (based on density differences).
- Know the types of plate boundaries (and examples of each), and density differences in the crust, asthensophere, and whole Earth.

Lab 2: Topographic Maps:

- Be able to use latitude and longitude (don't forget to indicate N, S, E, W as needed).
- Use the bar scale and fractional scale on a map, and be able to determine distances from a map.
- Be able to determine a verbal scale by using the fractional scale and vice versa (see Part I of the topographic maps lab).
- Determine the contour interval (even if it is not indicated on the map).
- Know the difference between elevation and height, and be able to
  determine **elevation**, **height**, and **slope** (be careful not to confuse these terms).
- Be able to determine the direction a river is flowing based on topographic contours.

Lab 3: Minerals (you will be given streak plates and glass plates to use during the exam).
Given a mineral sample*****, be able to answer the following questions:

* Is this mineral metallic or non-metallic?
* Is this mineral harder or softer than glass?
* Is this mineral harder or softer than your fingernail?
* How many directions of cleavage does this mineral have?
* What color is the streak of this mineral?

*****Note: You should be able to answer these questions for any mineral on the list (samples A - O). The samples
for this portion of the exam **will not necessarily be a mineral sample you saw in lab** (i.e., minerals A–V).
Know the distinguishing properties of minerals A–O (there will be 1 or 2 distinguishing properties for each mineral). Be able to **identify minerals A–O** without the charts in your lab manual.
***Hint:** You do not need to memorize *every* property of *every* mineral; you only need to memorize each mineral's *distinguishing* properties.
For Example: Hematite's distinguishing property is that it is the only mineral that streaks red/brown. If you are given a sample on the test that streaks red/brown, then you know that it is hematite.
Warning: You will be given some A–O mineral samples that look different than the ones you saw during lab.
Prepare for this by knowing the distinguishing properties of minerals A–O; Do NOT try to just memorize what the mineral samples look like.