

## NOTES FOR THE FINAL EXAM

The final exam for the course will be given in this room on Wednesday May 5 from 4:15-6:15. I anticipate the test will take most if not all of the allotted two hours, but the test will have a hard cut-off time at 6:15.

You may use calculators and it is advisable to bring one to the exam, however you may not borrow another student's calculator.

The test will cover all of the material presented in the course, either in lecture, in hand-outs and/or as online documents, or assigned for reading.

You should be able to:

- Solve problems numerically using any of the equations we have studied this semester.
- Produce graphs from data or equations, interpret the meaning of graphs presented to you, or produce graphs that describe a situation (like the questions on the last hour exam involving solar altitude or descriptions of motion). You should know, for instance, how to use the exponential and square root functions on your calculator.
- Describe how you would design an experiment or activity. For these questions, I might ask you how you would handle a certain experiment if you were missing one or more pieces of equipment or how you might design an activity if you had to deal with certain constraints.
- Apply the principles of the science concepts we have studied to explain an observation or predict an outcome (egs: The Earth is twice the radius of Mars, explain which planet do you think is more likely to be currently geologically active; the focal length of a diverging lens is always negative, can the image formed by a diverging lens ever be on the opposite side of the lens from the object?)
- Apply the main concepts and points from RAGS to analyze a question or statement about STEM education. As on the second hour exam, your grade will depend on how well you use data/information to justify your answer.

I will be in my office (LSB 430) on Monday (May 3) from 12-4 and on Wed. (May 5) from 10-2 for office hours.

I will post practice questions and answers by Friday.