Applied Geophysics
Geol 455

Lectures: MWF 11-12, Labs: Mon, 2-4pm [Hebeler 108]
Professor: Tim Melbourne tim@geology.cwu.edu

Major Course Outcomes:
To understand how quantitative, field-based geophysical analysis techniques can be applied to solving environmental problems and constraining geological hazards. To know the basic physics and applications techniques of Ground Penetrating Radar, Multi-channel seismic surveying, magnetics.

Office Hours
Pretty much any time that I’m in around, in Hebeler 110a. Please feel free to stop by with questions relating to lectures, labs or reading.

Main Text: Whole Earth Geophysics, by Robert J. Lillie
Some of the material in this class will be derived from notes and products from the PulseEkko Ground Penetrating Radar unit.

Labs/Field Work.
This class is a largely a field based component, and much of the class will be spent using CWU’s GPR unit in the field.

Homework.
There will be approximately 7 homework assignments for the class

Exams.
A take home, open book mid-term exam is scheduled for some time in early May. It will include material from lectures and the labs. There will also be a take-home, open-book final exam.

Speaker Series
Geological Sciences has a speaker series, and you are required to attend. For particularly relevant talks you will be asked to critique the talk in a ~2 page manuscript due in class following the talk. You are invited to come to dinner with the speaker after their talk.

Grades:
Grades will be determined by lab and homework exercises [50%], one mid-term exam [20%], a take-home final exam [30%]. Clearly, doing well on the labs and homework is key to doing well in the class.